

2009-2011 Graduate Bulletin

***Lehman College
The City University of New York
250 Bedford Park Blvd. West
Bronx, NY 10468
718-960-8000
www.lehman.edu***



IMPORTANT NOTICE OF POSSIBLE CHANGES

The City University of New York reserves the right, because of changing conditions, to make modifications of any nature in the academic programs and requirements of the University and its constituent colleges without notice. Tuition and fees set forth in this publication are similarly subject to change by the Board of Trustees of the City University of New York. The University regrets any inconvenience this may cause.

The responsibility for compliance with the regulations in each bulletin rests entirely with the student. The curricular requirements in this bulletin apply to those students matriculated in the 2009-2010 and 2010-2011 academic years. This bulletin reflects policies, fees, curricula, and other information as of March 2009. For correct information, visit www.lehman.edu

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Mrs. Dawn Ewing-Morgan is the College affirmative action officer; coordinator for Title IX, which prohibits sex discrimination in federally assisted education programs; and coordinator for the Age Discrimination Act, which prohibits age discrimination in federally assisted education programs. Her office is located in Shuster Hall, Room 352, and her telephone number is 718-960-8111. She is also the College coordinator for the Americans with Disabilities Act and Section 504, which prohibit discrimination on the basis of disability.

Lehman College Graduate Bulletin
Volume XXX, Number 2
2009-2010, 2010-2011

Produced by the Office of Media Relations & Publications
Lehman College
The City University of New York

Marge Rice, Director; Keisha Gaye-Anderson, Associate Director;
Yeara Milton, Web Content Editor; Nany Novick, Publications Manager;
Phyllis Yip, Web Designer; Lisandra Merentis and Norma Strauss, Production Assistants



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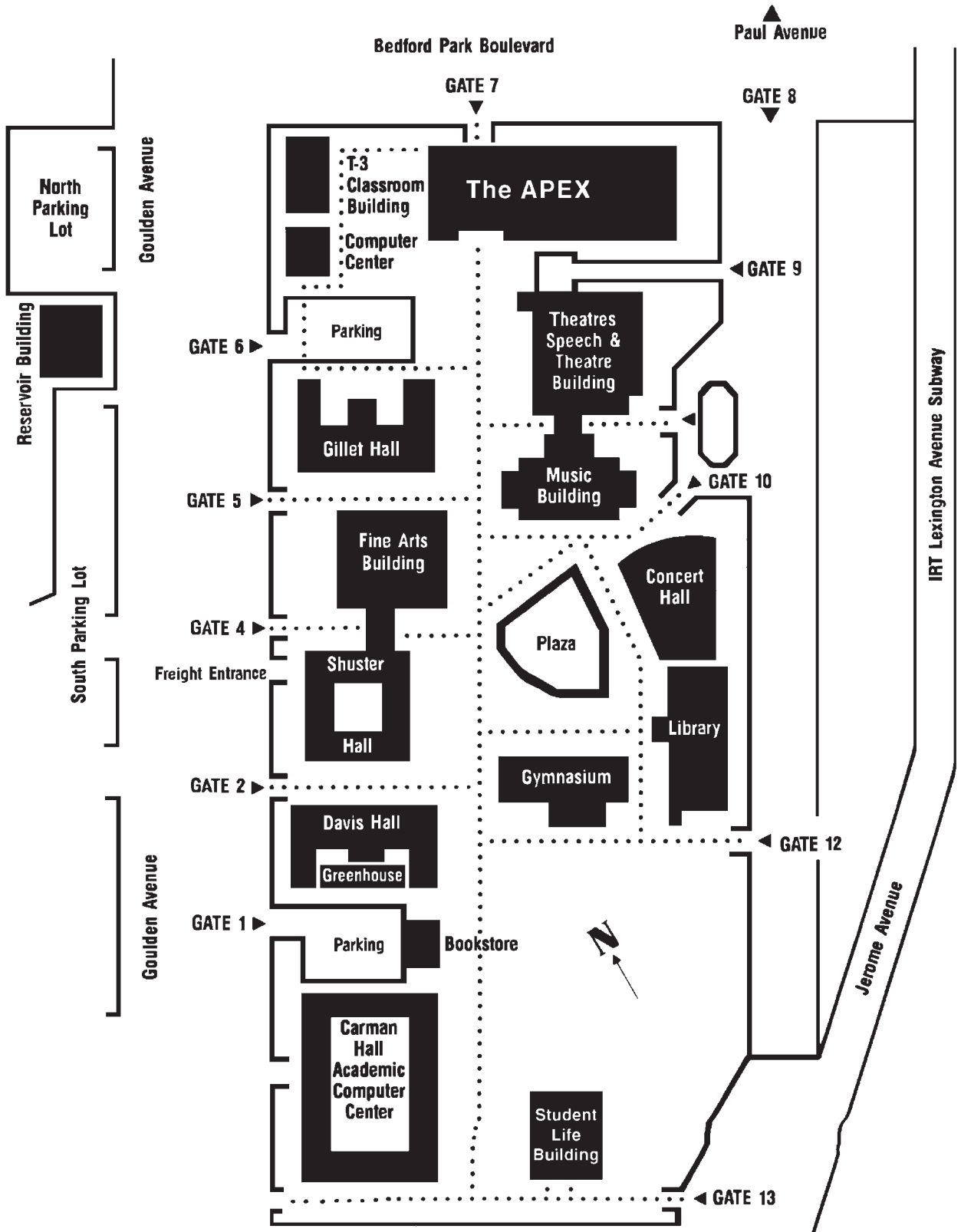
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History of Lehman College

Lehman College was established as an independent unit of The City University of New York on July 1, 1968, following a decision by the University's Board of Trustees to create a comprehensive senior college in the Bronx with its own faculty, curriculum, and administration.

The College took over the campus that, since 1931, had served as the Bronx branch of Hunter College, known as Hunter-in-the-Bronx. Adjacent to the historic Jerome Park Reservoir, the first four buildings in the plan—Gillet and Davis Halls, the Music Building, and the Gymnasium—were completed in 1934 during the Great Depression under the auspices of the Works Progress Administration.

For a decade before the entry of the United States in the Second World War, only women students attended, taking their first two years of study at the Bronx campus and then transferring to Hunter's Manhattan campus to complete their undergraduate work.

Shortly after U.S. entry into the war, the students and faculty vacated the campus and turned over the facilities to the U.S. Navy, which used them as a training station for the newly organized W.A.V.E.S. (Women Accepted for Volunteer Emergency Service). To commemorate this period, the Navy later installed a ship's bell from the U.S.S. Columbia on the campus.

In 1946 the campus won a niche in world history when it was made available to the United Nations at the urging of New York City officials. From March to August 1946, the first American meetings of the Security Council were held in the Gymnasium Building where intercollegiate basketball, archery, swimming, and other sports had been played. During festivities marking the 40th anniversary of the United Nations in 1986, the Southern New York State Division of the United Nations Association presented the College with a commemorative plaque, now displayed outside the Gymnasium Building. The College participated in the United Nations' 50th anniversary activities in 1995-96.

Normal collegiate activity resumed at the campus in 1947, but, in addition to women, the Bronx branch began accepting former servicemen, who studied in separate classes. In 1951 the campus became fully coeducational, and a four-year curriculum was introduced. The process of separating the Bronx campus from Hunter College into a separate unit began in 1967. Dr. Leonard Lief, chairman of the English Department, was named provost and made responsible for overseeing the transition. On July 1, 1968, Lehman College began an independent existence, with Dr. Lief as president.

The Board of Higher Education named the new college after Herbert H. Lehman, in recognition of the commitment to public service exemplified by the four-term governor of New York State who later became a U.S. Senator and was the first director-general of U.N.R.R.A. (the United Nations Relief and Rehabilitation Administration). The College was formally dedicated on March 28, 1969, the 91st anniversary of Governor Lehman's birth. Each year, on or about March 28, the College commemorates the double anniversary by inviting a distinguished speaker to deliver the Herbert H. Lehman Memorial Lecture.

Much has occurred at the colleges of City University since 1968. As the only public senior college in the borough and southern Westchester County, Lehman College has adapted to meet changing conditions and is poised to respond to new needs and challenges.

On the undergraduate level, Lehman's General Education Curriculum is designed to provide training in a range of essential skills as well as a broad understanding of the achievements and methods of the liberal arts and sciences, all of which allow informed inquiry into subjects of both public and personal concern. It requires a series of courses in writing, mathematics, foreign language, and natural sciences. Students must also complete at least one course from a list of courses in seven areas: Individuals and Society; Socio-Political Structures; Literature; The

Arts; Comparative Culture; Historical Studies; Knowledge, Self, and Values. In addition, students must complete two upper-division interdisciplinary courses: one in Topics in the Humanities and the Sciences and one in the American Experience. To develop writing skills, students must complete four courses designated as writing-intensive. Major and minor fields of study are also required.

On the graduate level, the College has developed professional programs in nursing, teacher and counselor preparation, accounting, business, computer science, health services, public health, speech-language pathology, and social work. The College also offers strong traditional liberal arts graduate programs in art, biology, English, history, Spanish, and mathematics.

For more than two decades, Lehman has deepened its involvement with the surrounding community. The opening of the Lehman Center for the Performing Arts in 1980 and the Lehman College Art Gallery in 1984 has made the College a cultural center for the region. Together with the City and the Humanities Program, the Department of Music, and the Theatre program, they present dozens of concerts, plays, dance performances, and exhibitions that are free or nominally priced.

The Art Gallery is housed in the Fine Arts Building, which was designed by the renowned architect Marcel Breuer—as was Shuster Hall, which houses the College's administrative offices. The Concert Hall, the adjacent Leonard Lief Library, and the two Breuer buildings offer a striking contrast to the Tudor-Gothic architecture of the original College buildings, providing an environment of considerable architectural interest.

Anchoring the campus on its northern end is the APEX, designed by the internationally acclaimed architect Rafael Viñoly. Inside are sophisticated facilities for swimming, basketball, racquetball, weight training, track and field, and dance, as well as offices for academic departments. One of the latest facilities to reach completion on the Lehman campus is an Information Technology Center, which features self-contained microcomputer classrooms, an open lab area with 108 computers of various types, and other resources for both student and faculty use.

Lehman College also provides a variety of community services. The Institute for Literacy Studies sponsors classes to teach adults fundamentals of reading and writing, while the Speech and Hearing Center offers comprehensive evaluations of hearing and speech-language disorders.

There is also close collaboration between the College's teacher and counselor education programs and Bronx school districts.

- The New York City Writing Project supports workshops for teachers of writing as well as research at all educational levels.
- The Center for School/College Collaboratives receives external funding for projects that focus on increasing educational success for Bronx students and their families and preparing the students to enter and complete higher education. The Center works with the entire school community—administrators, teachers, students, and parents—and collaborates with the New York City Department of Education.
- The Bronx Institute provides Bronx students, grades 7-12, in a network of thirty-seven schools, with the academic support, skills, inspiration and preparation needed to pursue and succeed in post secondary education. The Bronx Institute addresses the needs of Bronx students through the coordination of services and programs that build a sense of community among students, schools, their families and post secondary institutions.

Lehman has joined with the New York City Department of Education and the educational reform organization New Visions for Public Schools to develop eight new small high schools in the Bronx. The schools—housed within larger, traditional high schools—are formed around the themes of the visual arts, teaching, music, nursing, medicine and allied health professions, and community research and learning.

In addition, in Fall 2002, the High School of American Studies at Lehman College opened on the Lehman campus. One of New York City's new specialized high schools and the only one to focus on American history, the school represents a collaboration among Lehman College, the New York City Department of Education, and the Gilder-Lehrman Foundation.

Dr. Ricardo R. Fernández succeeded Leonard Lief, the founding president of Lehman College, on September 1, 1990. Dr. Fernández had been assistant vice chancellor for academic affairs and professor of educational policy and community studies at the University of Wisconsin at Milwaukee. Throughout his tenure, Dr. Fernández has affirmed both the College's commitment to access to higher education for the economically disadvantaged and its strong commitment to educational excellence.

Mission, Vision, and Values Statements

MISSION STATEMENT

Lehman College serves the Bronx and surrounding region as an intellectual, economic, and cultural center. Lehman College provides undergraduate and graduate studies in the liberal arts and sciences and professional education within a dynamic research environment, while embracing diversity and actively engaging students in their academic, personal, and professional development.

VISION STATEMENT

Lehman College has entered a new era in its history as an institution of higher education. Already known for its outstanding faculty, dedicated staff, superb library, art gallery, theaters, speech and hearing clinic, and athletic facilities, the College is now building a new state-of-the-art, environmentally "green" science facility that will invigorate faculty and student research as well as prepare Lehman students for science-based careers.

Supported by the University's expanding technological resources, the College will promote creative teaching strategies, greater access to courses through online learning, off campus access to library resources and enhanced student services. The new Multi-Media Center will stimulate technological innovation in all areas of communications and the arts for both the College and the region.

Lehman has always been a commuter campus that prides itself on its diversity and commitment to multicultural understanding. Now, the College looks forward to providing a residential experience to attract a wider range of students and lead to the development of new learning communities to enhance student success.

Lehman College will prepare students to live and work in the global community through new interdisciplinary programs, such as environmental studies and international business, along with study abroad and experiential learning opportunities. The College's geographic information systems and numerous partnerships with schools, hospitals, social service and governmental agencies, small businesses, major corporations, and cultural and scientific institutions will contribute to the economic development of the region. Service learning and internship opportunities will be further developed to foster the engaged citizenship and commitment to public service embodied in its namesake, Herbert H. Lehman.

Recognized for small classes, close interaction between students and faculty, a successful Teacher Academy and Honors College, and a caring and supportive environment, Lehman College will celebrate its fiftieth anniversary in 2018 as the college of choice in the region, committed to preparing students for graduate studies, professional careers, and lifelong learning.

VALUES STATEMENT

Lehman College is committed to providing the highest quality education in a caring and supportive environment where respect, integrity, inquiry, creativity, and diversity contribute to individual achievement and the transformation of lives and communities.

The City University of New York

The City University of New York is a twenty-college university, with branches located throughout the five boroughs of the city. The University's governing body, the Board of Trustees of the City University of New York, formulates bylaws and policies providing direction for the operation of the University and of its constituent colleges. In addition, the Board passes on the policy recommendations submitted by each of the autonomous colleges. Funds for the City University are provided by the State of New York, City of New York, tuition, fees, and gifts. Federal and State government agencies provide grant funds for research, special programs, and student financial aid.

Although the City University was formally established in 1961, the first college of the University dates from 1847, when New York City established by referendum the Free Academy, now City College. The University today consists of ten senior (four-year) colleges, six community colleges, a four-year technical college, a doctoral-granting graduate school, a law school, a graduate school of journalism, an accelerated medical program, and a medical school. The Mount Sinai School of Medicine is affiliated with the University.

The Graduate School and University Center in mid-Manhattan offers a wide range of doctoral programs, including the Ph.D. program in plant sciences based at Lehman College. The Center also conducts urban research and administers the CUNY Baccalaureate Program, open to students at all CUNY colleges.

College Governance

In 1970 the student body and the faculty approved a new system of campus governance with the establishment of the Lehman College Senate. This body, with specified responsibilities in regard to academic policy and campus life, is made up of approximately 120 representatives of the students, faculty, and administration.

College Accreditation and Affiliations

Lehman College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools. Degree programs are registered by the New York State Education Department. Some degree programs are also accredited by professional associations.

Nursing programs are accredited by the Commission on Collegiate Nursing Education, and the Social Work program is accredited by the Council on Social Work Education. The College also offers Nutrition programs approved by the American Dietetic Association and a Health Services Administration program approved by the Association of University Programs in Health Administration. Lehman's B.S. degrees in Chemistry are certified by the American Chemical Society. The graduate program in Speech-Language Pathology is accredited by the American Speech-Language-Hearing Association. All teaching and counseling programs offered by the College's Division of Education are accredited by the National Council for Accreditation of Teacher Education (N.C.A.T.E.). In addition, the Division of Education's counselor education program in school counseling offered by the Department of Counseling, Leadership, Literacy, and Special Education is nationally accredited by the Council for Accreditation of Counseling and Related Educational Programs (C.A.C.R.E.P.).

Lehman's B.S. and M.S. programs in Accounting provide the educational preparation required for licensure as a Certified Public Accountant in New York State. The College offers State-approved teacher education programs that can lead to New York State provisional or permanent certification. Graduates of the undergraduate Nursing program are eligible to take the Registered Nurse licensure examination.

Lehman College has chapters of Phi Beta Kappa, Sigma Xi, and Golden Key National Honor Society. Individual disciplines have their own honor societies with national affiliations. The College is a member of the National Collegiate Athletic Association and the Eastern Collegiate Athletic Conference.

Degree Programs

UNDERGRADUATE CURRICULUM

Lehman College offers undergraduates a wide choice of major programs in both the liberal arts and sciences and in the professions. The College offers the degrees of Bachelor of Arts (B.A.), Bachelor of Science (B.S.), Bachelor of Fine Arts (B.F.A.), Bachelor of Business Administration (B.B.A.), and Bachelor of Arts-Master of Arts (B.A.-M.A.). Majors are either departmental or interdepartmental.

GRADUATE CURRICULUM

The College offers a choice of more than thirty master's degree programs in arts and sciences, health fields, and teacher education. Advanced certificates are offered in some areas. The degrees offered are the Master of Arts (M.A.), Master of Science (M.S.), Master of Science in Education (M.S. Ed.), Master of Arts in Teaching (M.A.T.) in Music, the Master of Fine Arts (M.F.A.) in Art, the Master of Public Health (M.P.H.), and the Master of Social Work (M.S.W.). In addition, more than seventy-five Lehman College faculty members participate in City University doctoral programs.

Academic Organization

The College's academic departments and programs are divided into four divisions:

DIVISION OF ARTS AND HUMANITIES

African and African American Studies
American Studies
Art
Comparative Literature
English
History
Institute for Irish American Studies
Journalism, Communication, and Theatre
Languages and Literatures
Latin American and Puerto Rican Studies
Linguistics
Music
Philosophy
Speech-Language-Hearing Sciences
Women's Studies

DIVISION OF EDUCATION

Bronx Institute
Center for School/College Collaboratives
Early Childhood and Childhood Education
Institute for Literacy Studies
Middle and High School Education
Counseling, Leadership, Literacy, and Special Education

DIVISION OF NATURAL AND SOCIAL SCIENCES

Anthropology
Biological Sciences
Chemistry
Economics, Accounting, and Business Administration
Environmental, Geographic, and Geological Sciences
Health Sciences
Italian American Studies
Mathematics and Computer Science
Nursing
Physics and Astronomy
Political Science
Psychology
Social Work
Sociology

DIVISION OF ADULT AND CONTINUING EDUCATION

Adult Degree Program
Continuing Education
CUNY on the Concourse

Schedule of Courses

ACADEMIC YEAR

During the regular academic year, which runs from late August through the end of May, Lehman offers a full range of undergraduate and graduate courses on a day, evening, and weekend schedule.

WINTER AND SUMMER SESSIONS

Lehman offers a winter intersession during January. In addition, Lehman offers two sequential summer sessions, one beginning in June and the second in July. Students may shorten the time to their college degree by registering for courses in either the winter intersession or during the summer. Undergraduate and graduate programs accept matriculants, as well as visiting and non-degree students.

Research Institutes and Community Resources

BRONX DATA CENTER

The Bronx Data Center collects and analyzes demographic material related to the Bronx and adjacent areas, in order to provide service to the Lehman community as well as to cultural, social service, civic, media, and other organizations. The Center focuses on data for very small geographic units (down to the city block) as well as the Bronx as a whole. Historical data going back several decades complements the latest census information. The Center specializes in the graphic presentation of data through computer-generated maps. See: www.lehman.edu/deanrns/bronx-datactr/discover/bxttext.htm.

THE BRONX INSTITUTE

The mission of the Bronx Institute at Lehman College is to foster faculty research relevant to the improvement of education and the quality of life in the Bronx; and to provide a forum to discuss, analyze, and identify potential solutions to contemporary educational, social, political, cultural, and economic challenges facing the Bronx community, in particular, and other urban areas at large. As a community resource, the Bronx Institute is committed to act in cooperation with other academic institutions, community groups, and organizations to develop joint projects, especially those that enrich the educational needs of all Bronx students. The vision of the Institute is to foster and promote equity and excellence in the education and learning of Bronx students in grades K-16 by involving administrators, teachers, parents, and the students themselves in high-quality programs that support and enhance the educational opportunities of the students.

THE CENTER FOR SCHOOL/COLLEGE COLLABORATIVES

The Center for School/College Collaboratives designs and implements programs, in partnership with Bronx schools, to enrich student learning and ensure student readiness and motivation to graduate high school and enter college. Programs offered by the Center primarily emphasize student outcomes and achievement. These programs encompass: student and teacher enrichment in mathematics, science, and technology; recruitment of middle and high school students for careers in teaching; intensive work with at-risk students to prepare them for educational transitions from middle to high school and from high school to college; pre-service teacher preparation for bilingual students and para-professionals; in-service professional development in technology and interdisciplinary teaching; and close working relationships with over twenty Bronx schools.

Programs focus on working intensively with students and teachers from particular schools and on building pipelines for students since these efforts have been shown to have greater potential for success than programs that draw students from a wide range of schools.

The Center subscribes to several Principles of Collaboration: all partners are equal; planning and implementation involve school administrators/ teachers/staff/students/parents; broadening student/teacher contact in informal, hands-on, project-based settings; activating parent and family involvement; focusing on integration of student learning experiences; developing a plan of action; establishing linkages among projects; and encouraging high school students to qualify for, and take, college credit courses while still in high school.

The Center also houses Lehman's well-regarded, CUNY-sponsored College Now Program. The goal of the program is to insure that all students meet and exceed the performance standards required for high school graduation and that all those who wish to pursue postsecondary study are prepared to do so. Lehman has had a version of College Now or Bridge to College

since 1985, when qualified students involved in the College's various funded programs were invited to enroll in college-credit courses. The College Now eleventh- and twelfth-grade program offers a variety of college-credit courses depending on student interest and ability. These include courses in psychology, studio art and art history, calculus and pre-calculus, education, biology, English, history, computer science, economics, geology, philosophy, speech, and sociology.

Funding for Center programs has been provided by the New York City Board of Education, U.S. Department of Education, National Aeronautics and Space Agency, New York State Education Department, the City University of New York, Fund for Improvement of Post-Secondary Education, Aaron Diamond Foundation, and others. For more information on the Center and its individual programs, visit the following website: www.lehman.cuny.edu/education/center/center.htm.

THE INSTITUTE FOR LITERACY STUDIES

The Institute for Literacy Studies, founded in 1984, is a research unit of The City University of New York. The Institute's mission—reforming and improving urban education—has deep significance in its home borough of the Bronx as well as throughout New York City and the nation. The Institute defines urban education in its broadest, most inclusive meaning to comprise the complex web of systems, settings, and relationships that foster learning. It works to advance research, articulate theory, and implement effective practice in literacy and mathematics education through initiatives in a variety of educational settings K-16, including schools, community-based after-school programs, adult literacy programs, and CUNY campuses. Through its Adult Learning Center, the Institute offers basic education, English language instruction, and GED preparation to members of the community who are not enrolled in school or college. See www.lehman.edu/litstudies.

THE INSTITUTE FOR IRISH-AMERICAN STUDIES

The CUNY Institute for Irish American Studies, was established by the CUNY Board of Trustees to focus on the Irish-American Diaspora and its impact on American culture and society. The Institute, first and foremost, serves as a clearinghouse for research opportunities in Irish-American studies for students, staff, and faculty on all of the campuses of the City University of New York. Current projects being undertaken by the Institute include Publishing in Irish America 1820-1922, Great Irish Famine Curricula In-Service Training, Documenting Return Emigration, Curriculum Design: Teaching the Irish Language in America, the "New Irish" and Film, Mapping Irish America, and the Irish in the Americas.

In line with the current research projects of the Institute, an extensive program of public lectures and events is sponsored each semester. The Institute invites researchers and leaders in the community to present at its Wednesday evening lecture series. The Institute also sponsors day-long symposia on specific topics, Irish language conversation circles, and celebrations of the arts. The Institute additionally makes a number of distance education courses arising from its research areas available to students at CUNY campuses and throughout the country. These courses make use of online software as well as tours and lectures in the U.S. and abroad.

Graduate Programs and Policies

Graduate Programs

Inventory of Graduate Programs Registered with New York State

Academic Policies and Procedures

Registration Policies and Procedures

Degree Requirements and Policies

Grading System



Graduate Programs

Through its graduate programs, Lehman College offers qualified students the opportunity to pursue the advanced study of academic disciplines in breadth as well as in depth. Emphasis is placed on scholarship, original work, and training in research.

The College offers over thirty master's degree programs in arts and sciences and in professional studies. Graduate enrollment is approximately 2,300 students of a total Lehman student body of almost 12,000. Most graduate students attend part-time, combining graduate study with a regular job or career. Graduate courses are generally scheduled late in the day to facilitate attendance.

The degrees offered are the Master of Arts (M.A.), Master of Science (M.S.), Master of Science in Education (M.S. Ed.), Master of Arts in Teaching (M.A.T.), Master of Fine Arts (M.F.A.), Master of Public Health (M.P.H.), and Master of Social Work (M.S.W.). Lehman also offers advanced certificates. Lehman faculty participate in most City University doctoral programs. In association with the New York Botanical Garden, a plant sciences concentration in the University doctoral program in biology is based at Lehman College.

Office of Academic Standards and Evaluation/Graduate Studies

The Office of Academic Standards and Evaluation/Graduate Studies (Shuster Hall, Room 275, 718-960-8972) coordinates all graduate programs, policies, and procedures. The Graduate Studies Adviser supervises the office and is available to answer questions regarding graduate study and College-wide policies pertaining to graduate study at Lehman. Questions about specific academic programs or program requirements should be directed to the appropriate Graduate Program Adviser.

Departments Offering Graduate Programs

Graduate programs leading to a master's degree or advanced certificate are offered by the following departments: Art; Biological Sciences; Counselor, Leadership, Literacy, and Special Education; Early Childhood and Childhood Education; Economics, Accounting, and Business Administration; English; Health Sciences; History; Mathematics and Computer Science; Middle and High School Education; Music; Nursing; Languages and Literatures; Social Work; and Speech-Language-Hearing Sciences. *A detailed inventory of degrees, programs, and specializations is contained in this chapter of the bulletin.*

DOCTORAL PROGRAMS WITH CUNY

Lehman College, in conjunction with the Graduate School and University Center, contributes faculty, and in some cases facilities, for the following doctoral programs of The City University of New York:

Anthropology
Art History
Biochemistry
Biology (Plant Science doctoral program at Lehman College)
Chemistry
Classics
Comparative Literature
Computer Science
Earth and Environmental Sciences
English
French

Hispanic and Luso-Brazilian Literatures
History
Linguistics
Mathematics
Music
Philosophy
Physics
Political Science
Psychology
Sociology
Speech and Hearing Sciences
Theatre
Urban Education

EDUCATION PROGRAMS

Designed primarily for students who have completed an undergraduate teacher-preparation program—including general education, academic specialization, and professional foundations—Lehman College's graduate programs in education extend the competence of the classroom teacher, school counselor, and school leader; provide training for specialized school personnel; and promote research for all school personnel. The programs focus on the mastery of academic disciplines, the development of education theory and practice, opportunities in field experiences, and research on issues of particular relevance to teachers, counselors, and leaders in urban schools.

Graduate programs in education are designed to develop school personnel able to serve students of diverse needs in urban schools. The education programs allow the prospective professional to specialize in such fields as Early Childhood and Childhood Education, Middle and High School Education (English, social studies, mathematics education, science education, foreign language education, and Teaching English to Speakers of Other Languages—T.E.S.O.L.), counselor education, educational leadership, literacy studies (reading education), and special education.

A special program, designed for professional musicians, leads to the Master of Arts in Teaching (M.A.T.) music degree and New York State certification as teacher of music.

The academic and education programs described in this bulletin are designed to fulfill the requirements for New York State initial or professional certification. Students who graduate from an education program may apply for New York State initial or professional certification, contingent upon their credentials.

TEACHER CERTIFICATION REQUIREMENTS FOR EDUCATION MATRICULANTS

Initial Teacher Certification. Matriculants who successfully complete graduate teacher education programs at Lehman are eligible to apply for New York State initial certification. Information about requirements for specific certificates may be obtained from the Division of Education's Certification Officer, located in Room B33 of Carman Hall.

- Candidates for initial teacher certification must meet the State requirements for certification as follows:
- A bachelor's degree in liberal arts or science;
- Completion of N.Y.S. registered teacher preparation program (master's degree) in the field that a certificate is sought;
- Successful completion of internship or student teaching;
- Passing the New York State Certification Examinations: (a) the Liberal Arts and Sciences Test (L.A.S.T.), (b) the Content Specialty Test (C.S.T.), and (c) the Assessment of Teaching Skills—Written (A.T.S.-W.); and

- Completion of the workshops on school violence prevention and child abuse identification.

Matriculants must file an application for initial teacher certification at the start of their final semester of graduate study. Filing instructions may be obtained from the Certification Officer, Room B33, Carman Hall.

The certification process is as follows:

1. The candidate completes the graduate education program and obtains the degree.
2. The candidate files for certification using the N.Y.S.E.D. Teach System with the Certification Officer.
3. The candidate contacts the Certification Officer when his or her record of graduation date is available on eSIMS.
4. The Certification Officer reviews the transcript to ensure that the candidate has met the New York State liberal arts and science requirements.
5. The candidate may need to take additional courses if there is deficiency in the coursework.
6. The Certification Officer enters an institutional recommendation for N.Y.S. certification.
7. The State Education Department mails the teaching certificate directly to the applicant in two to three weeks.

Professional Teacher Certification. Completion of a graduate program in education at Lehman College may lead to New York State professional certification. Students who wish to obtain professional certification in Special Education, Educational Leadership, Literacy Studies, Middle and High School Education (e.g., English, mathematics, social studies, T.E.S.O.L., science, and foreign language), or Early Childhood and Childhood Education must have earned an initial teacher certification. Information on requirements for professional certification is available from the Office of Teacher Certification. Lehman College recommends a student for professional certification only in the area of his/her master's degree. For example, a student who holds initial (provisional) certification in Childhood Education (Grades 1–6) may apply for professional certification in Special Education if his or her master's degree is in Special Education. Students, however, may apply on their own for professional certification in an area outside their master's degree specialization.

Academic Policies and Procedures

DEGREE REQUIREMENTS AND POLICIES

To earn a Master of Arts, Master of Science, Master of Science in Education, Master of Social Work, Master of Public Health, Master of Arts in Teaching, or Master of Fine Arts degree, a student must:

1. Be formally admitted to a degree program, i.e., be matriculated. (*Students cannot be matriculated simultaneously in more than one master's degree program at Lehman College.*)
2. Complete no fewer than 30 credits of graduate courses that are acceptable to the department of specialization.
3. Maintain a minimum Grade Point Average of 3.0.
4. In most programs, write a thesis based on independent research, complete an appropriate special project, and/or pass a comprehensive examination. Departmental requirements are outlined elsewhere in this bulletin.
5. Complete all requirements for the degree within five years following matriculation.
6. Complete all departmental requirements for the degree.

COMPREHENSIVE EXAMINATION

In many master's degree programs at Lehman College, candidates are required to pass a comprehensive examination as part of their degree requirements. Students should consult the Graduate Program Adviser in the program in which they are enrolled to determine the precise requirements for the degree in that program.

Students not successful on the first attempt at the comprehensives are urged to discuss their examination with their Program Adviser before taking the examination a second time. Students unsuccessful after two attempts are dropped from the College. In order to take the examination a third time, students must appeal to the Graduate Studies Committee no later than the third week of the semester immediately following their second unsuccessful attempt. If their appeal is successful, students then should apply for readmission through the Office of Graduate Admissions (Shuster Hall, Room 150). Filing an appeal does not in itself guarantee that any student will be granted a third attempt at the comprehensive examination. No further appeals are possible after a third unsuccessful attempt to pass the comprehensives.

Graduate students planning to take the comprehensive examination must be matriculated and currently registered. Students taking no courses in the semester in which they take their comprehensives must register for *maintenance of matriculation* and pay the appropriate fee.

THESIS OR PROJECT REPORT

In curricula requiring a thesis or project report, the thesis or report must be presented to the department chair or adviser in sufficient time to enable the work to be evaluated, corrected, amended, and the grade to be recorded before the date on which classes for that semester end. A candidate permitted to offer a thesis or project report must consult the adviser for departmental requirements for preparation of the thesis or report. The student must file with the thesis adviser the number of approved copies of the thesis or project report required by the program in which he/she is matriculated, along with a copy of the bursar's receipt for the binding fee.

TIME LIMIT FOR EARNING A LEHMAN COLLEGE MASTER'S DEGREE

Master's degree candidates must complete their programs within five years from the time they become matriculated students. Absence from the College for one or more semesters does not alter or affect the five-year limit (see Interruption of Studies below) for earning a degree. Graduate students who, due to unusual circumstances, are unable to complete their degrees within the five-year period may apply for an extension in the Office of Academic Standards and Evaluation/Graduate Studies. Extensions must be approved by the Graduate Program Adviser.

INTERRUPTION OF STUDIES

Although students are encouraged to make steady progress toward their master's degrees, absence for one or more semesters may be unavoidable. In order to resume their studies following an absence of any length, matriculated graduate students must contact the Office of Graduate Admissions (Shuster Hall, 150) to complete the application for readmission and pay the readmission fee.

Matriculated graduate students returning after an absence of *two or more years* are subject to any changes made to their master's degree program in their absence and must satisfy all degree requirements. In addition, returning graduate students must consult with their program adviser to determine if any of their previous coursework is out of date and to discuss their future course of study.

Following an absence of *three or more years*, matriculated graduate students must apply in the Office of Standards and

Inventory of Graduate Programs as Registered With the New York State Education Department

The following list gives the titles of Lehman College graduate programs that have been registered with the New York State Education Department. The list may include programs not currently offered by the College; it is the responsibility of each student to determine which programs are currently being offered. Students are cautioned that enrollment in other than registered or otherwise approved programs may jeopardize eligibility for certain student financial aid awards.

<i>HEGIS Number</i>	<i>Degree/Certificate</i>	<i>Title</i>
0502	MS	Accounting
1002	MA	Art
0831	MA	Art N-12 Teacher
1002	MFA	Art
0899	Adv. Cert.	Bilingual Extension for Secondary Teachers
0401	MA	Biology
0401.01	MA	Biology "7-12"
0502.00	MS	Business
0838	MS Ed	Business Ed./Secondary & Adult Ed.
0701	MS	Computer Science
0823	MS Ed	Early Childhood Education
0802	MS Ed	Childhood Education
1501	MA	English
1501	MS Ed	English Education
0899	Adv. Cert.	English Education
1501.01	MA	English "7-12"
0826.01	MS Ed	Guidance and Counseling
0837	MS Ed	Health N-12 Teacher
0837	MA	Health Education & Promotion
1214	MPH	Public Health
2205	MA	History
4901	MA	Liberal Studies
1701	MA	Mathematics
1701	BA-MA	Mathematics (Dual)
1701.01	MA/MS ED	Mathematics Education
0899	Adv. Cert.	Mathematic Education
0832	MAT	Music
1203.10	MS	Parent-Child Nursing
1203.10	MS	Adult Health Nursing
1203.10	MS	Nursing of Older Adults
1203.10	MS /Adv. Cert.	Pediatric Nurse Practitioner
1306	MS	Nutrition
0830	MS Ed	Literacy Studies
0835.01	MA/MS Ed	Recreation Education
0828.00	MS Ed	School Building Leader
0826.01	MA	School Counselor
0827.00	MS Ed	School District Leader
0834	MS Ed	Science Education
0899	Adv. Cert.	Science Education
2201.01	MA	Social Studies Education
0899.50	Adv. Cert.	Social Studies "7-12"
2201.01	MA	Social Studies "7-12"
2104	MSW	Social Work
1105.01	MA	Spanish "7-12"
1506.01	MA	Speech and Hearing Sciences
1506	MA	Speech and Theatre
1220	MA	Speech-Language Pathology and Audiology
0808	MS Ed	Teachers of Special Education
0899	Adv.Cert.	Teachers of Languages Other than English
1508	MS Ed	Teaching English to Speakers of Other Languages

NOTE: Changes in program requirements designated by the New York State Education Department for Teacher, Counselor and/or Administrator certifications occur from time to time. As such, students are advised to consult the office of the Division of Education, Room B-33 of Carman Hall, to determine the most current program requirements for certification. Students not seeking an institutional recommendation but who intend to apply independently for certification should consult with a departmental adviser prior to registration so that a course of study fulfilling state requirements may be planned. New York State may at some point end the independent transcript review route to certification. Students should consult the New York State Education Department website for updates or may check with the Division of Education's Certification Office to determine if a change in this policy has been adopted.

Evaluation/Graduate Studies for an extension of the five-year time limit for completing their degree program prior to applying for readmission. Nonmatriculated graduate students must reapply to the College and pay the application fee following an absence from the College of any length.

GRADUATION PROCEDURE

A student who expects to graduate at the end of a semester must file a formal application for graduation in the Office of the Registrar, Shuster Hall, Room 105, by the deadline published each semester in the Schedule of Classes. If the student does not graduate, he/she must refile for graduation in any subsequent semester in which graduation is anticipated.

Any incomplete grades (INC) on the graduate student's transcript must be resolved prior to the date of graduation. To resolve incomplete grades, students must either complete and hand in the missing work or, if the courses in question are not required for the degree, indicate to the Office of the Registrar that they do not intend to complete the work. Students who choose not to make up the missing work are required to sign a statement in the Registrar's Office indicating their awareness that INC grades remaining on the transcript can never be changed to letter grades.

This policy applies even if the course in question is not applicable toward the degree being awarded, and even if the one-year time limit for finishing incomplete grades has not expired. The transcripts of graduated students are sealed at the time of graduation, and no changes can be made after the graduation date.

Students cannot graduate if the indication "Z" appears in place of a grade on their transcript. The "Z" indicates that the faculty member teaching that particular course did not submit a grade to the Office of the Registrar. The student is responsible for contacting either the faculty member or the department chair to ensure that a grade is submitted.

MAINTENANCE OF MATRICULATION FEE

Students not enrolled in courses in any semester, who need to maintain matriculation, are required to register for maintenance of matriculation in the Office of the Registrar (Shuster 114) and pay the appropriate fee in the Bursar's Office (Shuster Hall 031). Students should register and pay this fee during the semester of absence. In the semester in which the degree is to be awarded, students must be either registered in courses or maintaining matriculation. Maintenance of matriculation is paid in summer sessions only when the student expects to receive the master's degree the following September. Students who have paid maintenance of matriculation do not have to pay the student activity fee or the consolidated service fee. The maintenance of matriculation fee cannot be waived.

Registration Policies and Procedures

ACADEMIC ADVISING

For graduate students, academic advising occurs at two levels:

- Each graduate program at Lehman College has at least one academic adviser to help in planning students' programs. Graduate students should consult frequently with their Program Adviser for information regarding their specific master's degree program, and they MUST see their *Program Adviser* before registering each semester. Frequent advisement is critical for acquiring up-to-date information and for monitoring progress toward the master's degree.
- The Office of Academic Standards and Evaluation/Graduate Studies (Shuster Hall, Room 275), managed by the *Graduate Studies Adviser*, provides information and advisement regarding College-wide academic policies and procedures. Among the matters addressed by this office are appeals (except grade appeals), changes of grade, academic retention and probation, acceptance with conditions, academic standards, and transfer credit policies.

REGISTRATION MATERIALS

Information for Web registration is mailed by the Office of the Registrar prior to the end of the current semester to all continuing graduate students who were registered at Lehman that semester. New graduate students or returning students who did not receive materials should obtain them from the Office of Admissions (Shuster Hall, Room 150) before the registration period.

REGISTRATION FOR GRADUATE COURSES

Electronic course permission of the Graduate Program Adviser is required to register for any graduate course. Consult the department for registration advising hours.

BURSAR'S RECEIPT

The bursar's receipt is the only valid proof of registration in courses. Students are responsible for checking registration materials for any errors before submitting them to the Registrar for processing. For students registering by telephone, the system will repeat their course requests for verification. Report any error on the bursar's receipt to the Business Office immediately, accompanied by a request for a corrected receipt. Keep all bursar's receipts in case questions regarding registration arise at a later date.

REGISTRATION IN UNDERGRADUATE COURSES

Graduate students who are advised by their Program Adviser to register for undergraduate courses must also get permission from the Office of Academic Standards and Evaluation/Graduate Studies. Upon receiving the required approval, they may register for such courses at the time of graduate registration. *Graduate students may not register on the Web for undergraduate courses.*

Credits earned in undergraduate courses that are not part of the graduate degree requirements do not count toward the graduate degree, and graduate students pay *undergraduate* non-degree tuition. Graduate students who register in undergraduate courses and who receive *graduate credit* for the courses must pay the applicable graduate tuition according to residency. A graduate student may not register in a given semester solely for undergraduate courses unless he/she obtains permission from both the Graduate Program Adviser and the Office of Academic Standards and Evaluation/Graduate Studies.

REGISTRATION IN OUT-OF-PROGRAM COURSES

A student who has been admitted to a specific graduate program, or has been given permission to take certain specific graduate courses, may not automatically register for other courses in other programs. Students may do so only if they obtain written permission from the graduate adviser in the second program and receive permission from the Graduate Studies Adviser.

REGISTRATION IN COURSES AT OTHER CUNY COLLEGES

Matriculated graduate students may take courses at other CUNY colleges with the permission of the Graduate Program Adviser or department chair and from the Office of Academic Standards and Evaluation/Graduate Studies. (*See Courses Taken on Permit.*) Permits and details regarding their use may be obtained from the Office of the Registrar, Shuster Hall, Room 106. Students must also contact the host college with regard to registration requirements. Graduate students from other CUNY colleges who wish to register at Lehman must file a nonmatriculant application with the *Office of Graduate Admissions* (Shuster Hall, Room 150) and submit a permit from the registrar of the home college.

The admission fee is waived for students attending Lehman College on permit.

Credit Policies

RESIDENCY REQUIREMENT

Graduate students in master's degree programs must complete *as matriculated students* at least one-half of the total graduate credits required to complete their Lehman College master's degree program, OR 18 graduate-level credits, whichever is greater.

Graduate students in certificate programs must complete at least one-half of the graduate-level credits required to complete their certificate program *as matriculated students* at Lehman College. This minimum number of credits to be taken after matriculation is known as the Residency Requirement. Due to the varied credit requirements of Lehman's graduate programs, students will generally have to complete somewhat more than the minimum residency requirement in order to graduate. No interpretation of this policy shall supersede the policy regarding Transfer of Credit outlined elsewhere in this graduate bulletin.

Six (6) credits of the Residency Requirement may be taken as permit classes at other CUNY colleges offering appropriate master's-level courses (see Permit Courses). Courses taken at non-CUNY institutions will not be counted toward the Residency Requirement. No part of the Residency Requirement may be satisfied using courses taken prior to matriculation at Lehman College or courses taken as part of a previously awarded master's degree program.

Exception:

Master's degree candidates from the Graduate School and University Center of The City University of New York (CUNY Graduate Center) may transfer to a senior college and complete the requirements for a master's degree, receiving credit for all graduate work satisfactorily completed at the Center.

TRANSFER OF CREDIT

- Courses applied toward a previously awarded graduate degree.
- Courses taken at Lehman College in a nonmatriculated status.
- Courses taken at other colleges where no degree has been awarded.

Students who wish to have graduate credits earned prior to matriculation at Lehman counted toward their master's degree should apply for transfer of credit during their first or second semester in attendance as a matriculated student, using the transfer credit form available in the Office of Academic Standards and Evaluation/Graduate Studies (Shuster Hall, Room 275). All credits to be applied toward Lehman College master's degree requirements are subject to the approval of the graduate adviser (or department chair) from the student's particular academic program. Transfer of credit must also be approved by the Graduate Studies office. Transfer credits must conform to the regulations for the program and the curriculum in which the student is matriculated. Grades of B or better in courses taken outside of Lehman College are required in order for courses to be eligible for transfer.

The following regulations apply to all matriculated Lehman College graduate students who applied and were accepted into master's degree or advanced certificate programs in the Fall 2007 semester or later. Students who matriculated before that date should consult the Graduate Studies office to determine the regulations that apply to them.

With appropriate permission, matriculated graduate students may apply as transfer credit toward their master's degree a total of 12 credits of graduate courses. Students matriculated in Social Work may request transfer credits only toward the special topics/elective requirement. Students matriculated in advanced certificate programs may transfer previously completed graduate

credits totaling the lesser of nine (9) credits or one-half of the total credits required for their certificate.

The credits transferred may include:

- Courses applied toward a previously awarded master's degree program at Lehman or at another accredited college (maximum 6 credits);
- Courses taken at Lehman in a nonmatriculated status; and
- Courses taken at other accredited colleges where no degree has been awarded.

Transfer credits are subject to the following limitations:

- Courses must be graduate-level and must be taken at accredited institutions offering master's degree programs.
- Courses taken five years or more prior to matriculation at Lehman are not considered for transfer. Exceptions to this time limit may be made only for compelling educational reasons. In such cases, the transfer of credit must be approved by the student's Graduate Program Adviser and the Graduate Studies Office.
- Only six (6) credits counted toward a previously awarded master's degree can be applied to any master's degree or advanced certificate earned at Lehman College.
- Graduate courses previously applied toward an undergraduate degree are not acceptable toward Lehman College master's degree programs.
- Where students have taken more than 12 credits prior to matriculation, courses taken at Lehman College will be given priority in counting toward the 12 credits transferable, provided they meet the College's requirements.
- Students who have taken more than the maximum allowable credits (12 credits) while in a nonmatriculated status must consult with their graduate program adviser to determine which of those credits will count toward the degree. The Program Adviser will notify the Graduate Studies Office of this decision, using the transfer credit form.
- Graduate courses taken at any non-CUNY institution after matriculation into a graduate program at Lehman College are included in the 12-credit maximum allowable and must receive prior approval from the Graduate Program Adviser and the Graduate Studies Office. (See also Courses Taken on Permit at Other CUNY Institutions.)
- Theses and other culminating master's degree projects taken at Lehman College or at institutions outside of Lehman are not considered for transfer to Lehman College master's degree programs.

NOTE: Students who have completed nine (9) or more credits prior to matriculation at Lehman, as well as students seeking a second master's, are advised to fill out the application for matriculation at the earliest possible date.

COURSES TAKEN ON PERMIT AT OTHER CUNY INSTITUTIONS

With appropriate permission, matriculated graduate students may take master's-level courses on permit at other colleges of The City University of New York and apply the credit toward the Lehman master's degree. Grades earned in these courses are treated the same as grades earned at Lehman College and are subject to the same restrictions. Grades in courses taken on permit will be recorded on the Lehman College transcript and will count in the computation of the Grade Point Average. No more than six (6) credits taken as permit classes may be counted toward the Residency Requirement.

Permits and details regarding their use are available from the Office of the Registrar, Shuster Hall, Room 106. All courses taken on permit must be approved by the Graduate Program Adviser or the department chair and the Office of Graduate Studies.

CREDIT LOADS

A full-time program of coursework for graduate students is a minimum of 12 credits in any semester. Students may take no more than 17 credits of graduate work in any fall or spring semester. During the summer semesters, graduate students may take no more than two courses in each session. Exceptions to these limits must be approved by the Graduate Program Advisor and the Office of Academic Standards and Evaluation/Graduate Studies. The Graduate Studies Office will not approve credit loads of more than 16 credits in the first semester of graduate study. International students who have been admitted to the United States on student visas are required to complete at least nine (9) credits each fall and spring semester.

Grading Policies

Grades as submitted to, and recorded in, the Office of the Registrar are the sole judgment of the instructor. Grade changes resulting from personal appeals to the instructor and hardship claims are never honored. Students may not raise their grades by completing extra work after the final grade has been recorded. Occasional grading errors do occur, and these are always corrected promptly when properly certified to the Office of Academic Standards and Evaluation/Graduate Studies. Students who believe a grade is unfair may file a departmental grade appeal (*see "Appeals" in this chapter of the bulletin*).

Attendance Policy

Students are expected to attend classes regularly. Instructors, as well as departments or degree programs, may establish specific attendance requirements. It is the student's responsibility to ascertain the effect attendance may have on the grade in a course. Students receiving financial aid must be certified as attending classes regularly to maintain their eligibility.

Continuation

Students, once accepted to an academic program, are subject to any continuation requirements as determined by their academic department. Such requirements are outlined in the pages in this bulletin that relate to the academic departments. Continuation requirements may include, but are not limited to, minimum overall Grade Point Average, minimum semester Grade Point Average, minimum grades to be achieved in specific courses, completion of all prerequisite and corequisite courses, attendance and performance at fieldwork sites, purchase of liability insurance, and submission of required test scores. Failure to meet continuation requirements may result in additional required coursework over and above that outlined in the program requirements, repetition of designated classes for no academic credits, stopping out for one or more semesters, or termination of enrollment in the master's degree program.

Grading System

The following academic grades are given in Lehman graduate programs: A, A-, B+, B, B-, C+, C, C-, and F.

AUD: Attendance credit.

W: The grade in any course from which a student officially withdraws prior to the published deadline, indicating that the withdrawal was without prejudice. Official withdrawal is accomplished by filing a withdrawal application in the Office of the Registrar.

WU: Any unofficial withdrawal from a course and any official withdrawal after the published deadline, unless the grade of W is recommended by the Office of Graduate Studies. A WU counts as an F in computing the Grade Point Average.

INC: The instructor may, at his/her discretion, assign the grade INC, meaning incomplete course work. INC grades must be removed by completion of course requirements within one year of assignment of the grade. If not removed within one year, the grade INC remains permanently.

WA: Administrative withdrawal (e.g., failure to comply with the State law on immunization).

Z: Grade not submitted by the instructor. Z grades must be resolved prior to graduation.

GRADE POINT AVERAGE (G.P.A.) COMPUTATION FORMULA

Quality points (QP) are calculated by multiplying the credit value of each course by the numerical value of the grade received, 4.0 to 1.7 for grades A through C-, and 0 for F or WU. (*See the following table.*)

	2 CR	3 CR	4 CR
A (4.0)	8.0 QP	12.0 QP	16.0 QP
A- (3.7)	7.4 QP	11.1 QP	14.8 QP
B+ (3.3)	6.6 QP	9.9 QP	13.2 QP
B (3.0)	6.0 QP	9.0 QP	12.0 QP
B- (2.7)	5.4 QP	8.1 QP	10.8 QP
C+ (2.3)	4.6 QP	6.9 QP	9.2 QP
C (2.0)	4.0 QP	6.0 QP	8.0 QP
C- (1.7)	3.4 QP	5.1 QP	6.8 QP
F (0.0)	0.0 QP	0.0 QP	0.0 QP
WU (0.0)	0.0 QP	0.0 QP	0.0 QP

- Add the number of credits taken, including those with F or WU grades.
- Divide the total number of quality points by the total number of credits attempted. This final figure is the G.P.A.

Both matriculated and nonmatriculated graduate students must maintain a minimum G.P.A. of 3.0 to remain in good standing at Lehman College. Matriculants require a minimum G.P.A. of 3.0 for graduation. *Undergraduate-level courses and courses transferred from other institutions are not included in computing the G.P.A.*

SAMPLE G.P.A. COMPUTATION

Grade	Quality Points		Credits Attempted	Total Quality Points
A	4.0	x	6	24.0
A-	3.7	x	4	14.8
B+	3.3	x	3	9.9
B	3.0	x	2	6.0
B-	2.7	x	5	13.5
C+	2.3	x	3	6.9
C	2.0	x	2	4.0
C-	1.7	x	4	6.8
F, WU	0	x	2	0
TOTAL			31	85.9

Number of credits taken = 31

Division of 85.9 (sum of quality points) by 31 = 2.77 G.P.A.

INC GRADES

A graduate student who receives a grade of INC (incomplete coursework) has one year from the time the grade was entered on the transcript to make up the work and have a change of grade submitted by the instructor. An INC grade entered in a fall semester, for example, must be completed before the end of the next fall semester. INC grades that are not made up within one year remain permanently on the record as INCs. They may not be made up at any later date unless the student successfully appeals for permission to do so. Permanent incompletes do not count in the Grade Point Average. INC grades cannot be made up after the student graduates (see also "Graduation Procedure" in this chapter of the bulletin).

CUMULATIVE GRADE POINT AVERAGE

In order to be awarded a master's degree, a graduate student must finish his/her program with a cumulative Grade Point Average (G.P.A.) of 3.0 (B) or better. Grades counted in the cumulative G.P.A. must be earned in graduate-level courses taken at Lehman College or in graduate courses taken on permit at other CUNY institutions, and all courses must appear on the student's Lehman transcript.

All grades in graduate-level courses will be counted in computing the G.P.A. with the following exceptions:

- Grades earned in courses given by other institutions for which transfer credit has been allowed.
- Grades earned in undergraduate courses taken for undergraduate credit.
- Grades earned in graduate-level courses can be excluded from the Grade Point Average only through a successful appeal supported by the Graduate Program Adviser and submitted to the Graduate Studies Committee (see "General Appeals" in this chapter of the bulletin). Graduate courses taken five (5) or more years prior to the current matriculation, or grades earned in courses unrelated to the current master's degree program, are excluded only upon appeal.

Academic Probation

LOW GRADE POINT AVERAGE

Graduate students whose cumulative Grade Point Average (G.P.A.) falls below 3.0 will be placed on academic probation. Students on academic probation have one semester in which to raise their G.P.A. to 3.0. During this probationary period, students who make satisfactory progress maintain both their academic standing with the College and their eligibility for financial aid. Any student whose Grade Point Average remains below 3.0 at the end of the probationary period will be dropped from the College. To be allowed to continue, graduate students dropped from the College following a semester of probation must file a successful appeal with the Graduate Studies Committee. Graduate students with 9 or more graduate credits completed, and whose Grade Point Average falls to 2.50 or lower (2.70 or lower in some programs), can continue in their graduate program only upon successful appeal to the Graduate Studies Committee. Such appeals must be accompanied by a letter of support from the academic department.

ADMISSION WITH CONDITIONS

Students matriculated with conditions may be subject to more stringent academic requirements, including (but not limited to) the denial of the probationary period and the need to maintain a Grade Point Average higher than 3.0. Applicable conditions are set forth in the student's acceptance letter.

UNSATISFACTORY ACADEMIC PROGRESS

A graduate student is deemed not to be making satisfactory academic progress if he or she has accumulated more than two open grades (INC). INC grades in thesis and other culminating master's degree projects are not considered in determining satisfactory academic progress. Students placed on probation for unsatisfactory progress will be given a strict deadline for completing the open grades on their transcript. They also may be limited as to the number of credits for which they can register or may be prevented entirely from registering in any semester until letter grades are entered on their transcripts for the courses involved. The INC grades in question cannot be made up after the assigned deadline. After that date, any courses remaining on the transcript with INC grades will be permanent, and the work can never be completed.

Note: In order to receive Title IV Federal Financial Aid, a graduate student must at least meet the G.P.A. required for good academic standing at the institution (3.0 at Lehman) and with the Office of Financial Aid and.

1. Not have attempted more than 150% of the credits normally required for completion of the degree.
2. Accumulate credits toward the degree equal to or greater than two-thirds of the cumulative credits attempted at the institution.

Students whose financial aid is denied for reasons of insufficient academic progress may file a written appeal.

GENERAL APPEALS

For a waiver of any of the College's regulations pertaining to graduate study, a student may petition the Graduate Studies Committee. Appeals are granted only for compelling reasons. To launch an appeal, students must submit a completed appeal form, available from the Office of Academic Standards and Evaluation/Graduate Studies (Shuster Hall 275), including a complete explanation of the issues involved and any relevant supporting documents. Supporting documents may include birth certificates, death certificates, letters from physicians, letters of support from faculty, and any documents that bear upon the case in question.

WITHDRAWAL FROM COURSES

The grade of W (withdrawal without penalty) is assigned only when a graduate student *officially* withdraws from a course. Students must complete the withdrawal process themselves, since the procedure requires a signature. No faculty member or program adviser can withdraw a student from a course. Graduate students can officially withdraw by reporting with their bursar's receipt to the Office of the Registrar (Shuster Hall, Room 114) before the deadline published each semester in the Schedule of Classes. If in-person withdrawal is impossible, students can mail a signed letter to the registrar, including their name, Social Security number, the department that teaches the course(s) from which they wish to withdraw, the course number(s), and the section number(s). This letter must be accompanied by a photocopy of their bursar's receipt. Withdrawals by mail received after the withdrawal deadline will not be processed. This procedure applies to courses taught on- and off-campus.

After the published deadline, students wishing to withdraw from a course without penalty can do so only by appealing successfully to the Office of Academic Standards and Evaluation/ Graduate Studies, Shuster Hall, Room 275 (see "Appeals" in this chapter of the bulletin). When students withdraw *unofficially*, i.e., the student simply stops attending class without completing the withdrawal procedure, the grade of WU is assigned for the course. This grade counts as a failure in computing the cumulative Grade Point Average.

GRADE APPEALS

A graduate student dissatisfied with his/her course grade should first discuss the situation with the instructor who assigned the grade. If the student is still not satisfied that the grade is fair, he/she should then consult the Graduate Program Adviser for the department in which the course was offered. The Graduate Program Adviser will then attempt to resolve the disagreement.

If the student is still dissatisfied, or if the program adviser was the instructor who assigned the grade originally, the student should appeal in writing to the department chair. If the chair is the instructor of the course in question, the senior member of the department Personnel and Budget Committee will act for the chair.

The chair will appoint a Graduate Grade Appeal Committee consisting of three faculty members from the department, all of whom have taught graduate courses. The Graduate Program Adviser may not serve on this committee.

The committee will examine all materials relevant to the appeal, submitted by both the instructor and the student, and will prepare a written report of its findings, either sustaining the original grade or recommending a change.

The chair will notify the student, the instructor, and the Office of Graduate Studies of the Committee's decision. If the Committee recommends a grade change, the chair will forward that recommendation (A-1) with the decision.

Grade appeals must be initiated in the semester following the entry of a permanent grade, and no grades can be changed after the date of graduation. The decision of the Graduate Grade Appeal Committee is binding on all parties.

ACADEMIC INTEGRITY

The most common but not the only forms of academic dishonesty are cheating on examinations and plagiarism, which is the appropriation of the words or ideas of another person, whether taken from print or electronic media, which are then passed off as one's own.

When academic dishonesty is suspected, the instructor will inform the student of his suspicions and the student's rights to:

- Receive any charges in writing;
- Remain silent without assumption of guilt;
- Receive from the instructor a copy of the Academic Integrity Statement; and
- Be advised of the instructor's intended sanction. The instructor and student may resolve the situation, either by agreeing that the suspicions are unfounded or agreeing upon a sanction. Any sanction agreed upon at this point must be reported, together with the charges, to the department chair and to the Office of Graduate Studies. The instructor must report these facts in writing. If no agreement is reached between the student and the instructor, the instructor must report in writing his intended sanction to the department chair and to the student as soon as possible. Then:
 - The student may appeal in writing to the department chair within three weeks of receiving notice of the intended sanction. If the chair is the instructor in question, the senior member of the department's Personnel and Budget Committee will act for the chair.
 - The chair will appoint a committee of three Lehman faculty members from his/her department to adjudicate the matter within three weeks by majority vote.
 - The Committee will send a written notification of its decision to the department chair, the student, the instructor, and the Office of Academic Standards and Evaluation/ Graduate Studies.
 - Either the instructor or the student has the right, within three weeks of receipt of notification, to appeal the department decision in writing to the Senate Committee on Graduate Studies. The decision of this committee is final. No further appeals are permitted. The committee will notify the department chair, the student, the instructor, and the Office of Graduate Studies of its decision. If any part of the three-week period falls outside the regular semester, the first three weeks of the next regular semester shall apply.
 - The Office of Graduate Studies will keep all records of such proceedings on file until the student's graduation, at which time the records will be destroyed.

If the charge of academic dishonesty is upheld, disciplinary penalties may be recommended by the Vice President of Student Affairs to the hearing panel composed of members of the Faculty-Student Disciplinary Committee, pursuant to the due process provisions of the Board of Trustees' Bylaws (Article 15.3). Such penalties, which may be imposed only through the Bylaws process, include but are not limited to: 1) suspension from the College or 2) expulsion from the College.

Admission, Tuition and Fees, and Financial Aid

Admission to Graduate Degree Programs
Tuition and Fees
Payment Procedures and Refund Policies
Financial Aid Programs and Requirements

Tuition and Fees are subject to change. Please refer to the Lehman College website (www.lehman.edu) for the latest information.



Admission to Graduate Degree Programs

The Lehman College graduate programs accept applicants who meet the College and departmental standards for admission to matriculated (degree) and nonmatriculated (nondegree) status.

MATRICULANTS

A matriculant (degree student) is one who has received formal written acceptance by the College and department for work toward a specific graduate degree. Candidates for a Lehman graduate degree will be admitted unconditionally if they have no deficiencies in prerequisite undergraduate coursework and meet all other College and departmental entrance requirements. Conditional admission to matriculated status may be offered to applicants who have deficiencies in prerequisite undergraduate coursework, or who lack the minimum Grade Point Average. "Conditions" are defined, at the time of admission, as a limited number of specific undergraduate courses (normally, either a maximum of 6 credits that must be completed within one year or a maximum of 12 credits that must be completed in three semesters), or a Grade Point Average that must be maintained during either the first or the first two semesters of matriculation.

GENERAL ADMISSION REQUIREMENTS FOR MATRICULANTS

1. To be admitted, an applicant must:
2. Possess a bachelor's degree (or its equivalent) from an accredited college or university. Submit an official transcript. Official transcripts and other documents in languages other than English must be accompanied by a notarized English translation. Students in their final undergraduate semester should submit the official transcript of coursework completed to date. Upon graduation, students must present an additional transcript showing the degree awarded. Lehman graduates who have attended other colleges are required to submit official transcripts from those colleges.
3. Have demonstrated the potential to successfully pursue graduate study, that is, have attained a minimum undergraduate grade average of B in the field selected for the graduate major and a minimum grade average of B- in the undergraduate record as a whole (higher in some programs). For more specific information, see the Graduate Program Adviser.
4. In all but education programs, have taken a minimum of 18 credits of previous work acceptable to the appropriate department in the proposed graduate major. For education programs, consult the departmental Graduate Program Adviser.
5. Submit a 500-word essay outlining your career goals.
6. If applying to the program in Accounting, submit an acceptable score on the Graduate Management Aptitude Test (G.M.A.T.).
7. If applying to the Master of Public Health program or Counselor Education/School Counseling program, submit a score on the Graduate Record Examination (G.R.E.).
8. If applying to a program in the Division of Education, submit a score for the Liberal Arts and Science Test (L.A.S.T.).
9. Submit letters of recommendation as required by the individual program.
10. If conditionally admitted, satisfy the conditions within the specified time period.
11. Meet additional departmental admission requirements, as specified.
12. If submitting academic records from a non-English speaking country, demonstrate competency in English through T.O.E.F.L. scores of at least 500 (higher for some programs).

NONMATRICULANTS

A nonmatriculant (nondegree student) is one who may take courses for credit but has not been formally admitted to a degree program. Under this status, students are not eligible for any degree at Lehman College, nor does coursework taken as a nonmatriculant guarantee admission to a degree program. If subsequently admitted to a degree program, the student can, with the approval of the Graduate Program Adviser(s), count a maximum of 12 credits earned as a nonmatriculated student toward the degree.

ADMISSION REQUIREMENTS FOR NONMATRICULANTS

To register for courses as a nonmatriculant, an applicant must:

- a) Possess a bachelor's degree from an accredited college or university. Submit a transcript showing the award of an undergraduate degree.
 1. Have a minimum undergraduate average of B-
 2. To take graduate courses in Accounting, submit an acceptable score on the Graduate Management Aptitude Test (G.M.A.T.).
 3. Obtain the approval of the department's graduate adviser.
 4. If submitting academic records from a non-English speaking country, demonstrate competency in English through T.O.E.F.L. scores of at least 500 (higher for most programs).

STUDENTS WITHOUT BACHELOR'S DEGREES AND SPECIAL STUDENTS

Professionals of exceptional ability may be admitted to graduate courses in the arts even though they have not earned a bachelor's degree. The admission of a special student requires approval of the appropriate department chair and the College's Office of Graduate Studies. Special students are not eligible for any degree.

LEHMAN UNDERGRADUATES

Undergraduate seniors at Lehman College who are highly qualified academically may earn credit in graduate courses. This credit may be applied to the student's undergraduate degree, or the student may enroll for graduate credit, in which case graduate fees must be paid for the course(s). The option chosen must be specified in writing, and the student must obtain the written approval of the appropriate department chair or Graduate Program Adviser and the College's Office of Graduate Studies before enrolling in a graduate course.

APPLYING FOR ADMISSION

An application form for admission may be obtained from: Office of Graduate Admissions, Shuster Hall, Room 150, 718-960-8702. Students can also download the matriculant and nonmatriculant graduate applications by logging on to the Lehman College homepage at www.lehman.edu. Once on the Lehman College homepage, do the following:

- Click on the Admissions link "Admissions & Student Services."
- Click on "Admissions Information," followed by "graduate," followed by "Prospective Students," which leads you to a page with the appropriate form(s). Adobe Acrobat Reader is needed in order to download the application.

MATRICULANTS

A completed application for matriculation consists of the application form, official college transcripts of all past undergraduate and graduate work, letters of recommendation as required by the individual department, and, in some instances, test scores, i.e., the G.R.E., G.M.A.T., T.O.E.F.L., and, in some programs, an interview or audition. The number of recommendations required, the topic(s) and format of the application essay, the particular test required, and whether or not a personal interview or audition is required can be determined by referring to the portions of this bulletin that describe the individual graduate programs.

Completed applications must be on file in the Admissions Office by April 1 (Speech-Language Pathology and Master of Public Health, March; Social Work, March 15) for the fall semester; November 1 for the spring semester. The Speech-Language Pathology, Social Work, Public Health, Educational Leadership, and Counselor Education programs accept applications only for fall admissions. Spring admission for Speech-Language Pathology depends on availability of seats. For more information, call the department at 718-960-8138, or the Graduate Admissions Office at 718-960-8702.

Admission to matriculated status requires review by the particular department the applicant wishes to enter. Only completed applications are put forward for faculty review.

NONMATRICULANTS

For applicants wishing to enter the College as nonmatriculants, a completed application consists of the application form and college transcript(s) that show completion of an undergraduate degree and test scores (G.M.A.T./T.O.E.F.L.) if required. Applications from prospective nonmatriculants may be accepted through the registration period only, subject to available space in the desired program.

DEPARTMENTAL APPROVAL FOR REGISTRATION IN COURSES

All applicants for graduate work at Lehman College, whether degree candidates or not, must meet with the Graduate Program Adviser before registering for any courses in order to plan an academic program. Registration is not possible without department approval. Telephone numbers of individual departments and Program Advisers can be obtained from the Office of Graduate Admissions (718-960-8702).

INTERNATIONAL STUDENTS

Lehman College is authorized under federal law to admit nonimmigrant-alien students. At Lehman, an "international student" is defined as any person studying in the United States on a nonimmigrant visa. The Test of English as a Foreign Language (T.O.E.F.L.) is required for admission of international students, except for nationals of English-speaking countries. The required minimum T.O.E.F.L. score is 500 for admission to Lehman and is higher in most fields. Information may be obtained from T.O.E.F.L. / Educational Testing Service, Princeton, NJ 08541-6151, U.S.A. Residents of English-speaking countries are exempt from taking the test.

All students on F-1 or J-1 visas must be full-time students every semester, carrying a course load of at least 9 credits, to qualify for and maintain this visa status. Form I-20 or IAP-66 will be issued to full-time students who have provided the required financial documentation to the Office of Admissions and have been admitted to the College. Qualified nonimmigrant aliens holding B (visitor) visas who wish to attend or have started attending Lehman College must apply through the International Student Adviser for a change of status to F (student) visa two months before their current B visa expires. The International Student Certification Officer can provide necessary documentation of the student's status at Lehman.

The College will not be responsible for any interruption and/or termination of studies and will not refund tuition or fees should the student be unable to obtain the required student visa or transfer and be required to leave the country before the end of a term. Students concerned about their status may consult with the International Student Certification Officer as soon as possible.

All prospective or new international students with student visas must consult the International Student Certification Officer before registration. The officer will inform students about immigration regulations and procedures, currency exchange, off-campus housing, and related matters of special concern to international students.

HEALTH

Students accepted for Lehman degree programs must have the physical and mental health that enables them to conform to all the College's academic requirements, including completion of the degree within a reasonable period.

Physical examinations are required by the College for programs and activities that may require certification of physical health.

IMMUNIZATION REGISTRATION REQUIREMENT

Students who do not submit proof of measles, mumps, and rubella (M.M.R.) immunization or who fail to return the meningococcal meningitis response form within a statutory grace period shall be prohibited from attending the institution. For additional information, contact the Health Services Center located in Room 188 of the T-3 Building at 718-960-8900.

Public Health Law 2165 requires that postsecondary students be immunized against measles, mumps, and rubella (M.M.R.).

All registered full-time students and part-time students born on or after January 1, 1957 who are enrolled for at least six, but fewer than twelve semester hours (or equivalent) per semester in an approved degree program or registered certificate program must submit proof of MMR immunization. Students may be exempt from the required MMR immunizations for religious or medical reasons. To qualify for a religious exception, students must submit a signed statement, or in the event the student is a minor (under 18), a signed statement from their parent or guardian, that they hold sincere and genuine religious beliefs that prohibit immunization. To qualify for a medical exception, students must submit a written statement from a licensed physician or nurse practitioner indicating that such immunization may be detrimental to their health.

Public Health Law 2167 requires that postsecondary institutions provide written information about meningococcal meningitis to its students and that students complete, sign, and return a meningococcal meningitis response form. Public Health Law 2167 does not require that students be immunized against meningitis.

Public Health Law 2167 requires colleges to distribute written information about meningococcal meningitis disease and vaccination and students to complete, sign, and return to the college, a meningococcal meningitis response form that: (a) confirms that the college has provided the information about meningococcal meningitis; and (b) indicates that either: (1) the student has received immunization against meningococcal meningitis within the ten years preceding the date of the response form; or (2) the student has decided against receiving the vaccination. This law applies to students who are enrolled in at least six semester hours (or the equivalent) per semester. No student may be exempt from receiving information or returning the response form.

PROHIBITION ON SUBMISSION OF FRAUDULENT ADMISSION DOCUMENTS

The submission of documents in support of applications for admission, such as transcripts, diplomas, test scores, references, or the applications themselves, that are forged, fraudulent, altered from the original, obtained under false pretenses, or otherwise deceptive is prohibited and is punishable by a five-year ban on applying for admission or five-year suspension from CUNY. A second violation is punishable by a lifetime ban on applying for admission or expulsion from CUNY.

ADMISSION OF STUDENTS WHO MAY POSE A RISK TO A COLLEGE

The College reserves the right to deny admission to any student if in its judgment, the presence of that student on campus poses an undue risk to the safety or security of the college or the college community. That judgment will be based on an individualized determination taking into account any information the college has about a student's criminal record and the particular circumstances of the College, including the presence of a child care center, a public school or public school students on the campus.

Tuition and Fees

GRADUATE TUITION

Tuition and fee charges are set by the Board of Trustees of The City University of New York. To find out the current tuition and fee rates, visit the Lehman College Website at www.lehman.edu/vpstud/finaid/ or call the Bursar's Office (718-960-8573).

BOARD OF TRUSTEES GUIDELINES

All fees and tuition charges listed in this bulletin and in any registration material issued by the College are subject to change by action of the Trustees of The City University of New York without prior notice.

In the event of any increase in the fees or tuition charges, payments already made to the College will be treated as a partial payment, and notification will be given of the additional amount due and the time and method of payment.

A resident student is a U.S. citizen who has had his or her principal place of abode in the State of New York for a period of at least 12 consecutive months immediately preceding the first day of classes for the semester for which the residency determination is made and who states his or her intention to permanently live and maintain his or her principal place of abode in New York State.

A full-time graduate student is one who is enrolled for at least 12 credits or equivalent. A part-time graduate student is one who is enrolled for fewer than 12 credits or the equivalent.

For each student, the tuition and fees due depend on whether he/she will attend full- or part-time, whether or not he/she resides in New York State, and whether he/she is or is not matriculated.

All fees, tuition charges, credits, and course hours listed are subject to correction in the event of error. All fees, calculations, and repeat billings are subject to correction in the event of error. Students will be obligated to pay the correct amount.

The schedule of tuition fees shall apply to all scheduled semesters, regardless of duration, subject to such special tuition fee rates as may be established by the Board of Trustees of The City University of New York. The same policy applies to summer session, except that there is no maximum tuition. Summer session students must pay for all credits or credit equivalents taken.

A child of a member of the permanent staff of The City University of New York, or a child of a deceased or retired member of such staff who had served for more than five years on an

annual salary, or a child of an employee of the City of New York or of a city agency who is required to live outside the State of New York in the performance of his or her official duties shall be charged resident rates. The resident rate shall be applicable to a student of another college or university which grants, in exchange, resident rates to a student of a college within The City University of New York. Evidence of satisfactory educational qualifications must be presented, and the approval of the president of such college within the City University is required.

All recipients of financial aid should be aware that this aid is based upon the personal and financial information that the student provides to Lehman College. In the event that a student is determined not to be eligible, in whole or in part, for any expected financial aid for which he or she has applied, he or she will be held fully responsible for payment of any monies that are due the College for registration. If students withdraw, either officially (by filling out a withdrawal form in the Registrar's Office) or unofficially (by not attending classes), from any course or courses for which they have registered and a reduction in aid occurs, the student will be held personally responsible for payment of any monies due to the College.

All students who register for a course or courses must sign the statement of student liability and will be held responsible for all tuition and fees associated with their registration. All graduate students are required to pay a Student Activity Fee, Technology Fee, and Consolidated Fee for each semester that they are registered.

DEFINITION OF RESIDENCY

A resident student is one who has had her/his principal place of abode in the State of New York for a period of at least 12 consecutive months immediately preceding the first day of classes for the semester for which the residency determination is made and who states his or her intention permanently to live and maintain his or her principal place of abode in New York State.

A person who is not a U.S. citizen but meets the residency requirements stated above must provide proof of his/her current immigration status.

Payment Procedures and Refund Policies

Students may pay their tuition and fees with:

- Cash, MasterCard, Visa, money order, bank check, traveler's check, and personal check, or submitted via the Web (using eSIMS). Students paying by check should make the check payable to Lehman College. The College will not accept second-party checks. The College will not accept a personal check from any student who has previously tendered a check that was returned by his/her bank.
- Financial Aid. Matriculated students who are recipients of aid from the Tuition Assistance Program (T.A.P.) must present proof of their award at the time of registration. They will be required to pay any difference. All recipients of T.A.P. should be aware that a student whose enrollment falls below full-time because of his/her withdrawal from, or the College's cancellation of, a course or courses will not be entitled to his/her financial aid. Students should consult with the Financial Aid Office as to what impact their action may have on their current semester's entitlement and future semesters' awards.
- Employer Voucher. Students who anticipate using an employer voucher for payment of their registration should verify with the Bursar's Office the acceptability of the voucher prior to registration. Vouchers must provide for immediate payment when billed and cannot be dependent on grades received for the term in question.

CREDIT CARDS: The College now accepts credit cards as defined above.

Graduate Tuition*

NEW YORK STATE RESIDENTS

Matriculated

full-time students: \$3,200.00 per semester

plus \$55.00 (Student Activity Fee) per semester

and \$15.00 (Consolidated Fee) per semester

and \$75.00 (Technology Fee) per semester

Matriculated

part-time students: \$270.00 per credit

plus \$35.00 (Student Activity Fee) per semester

and \$5.00 (Consolidated Fee) per semester

and \$37.50 (Technology Fee) per semester

MASTER'S OF SOCIAL WORK

Residents:

Full-Time \$3,800.00 per semester

Part-Time \$320.00 per credit

Excess Hours \$65.00 per credit

Maintenance of Matriculation \$630.00 per semester

Non Residents:

Full-Time \$535.00 per credit

Part-Time \$535.00 per credit

Excess Hours \$85.00 per credit

Maintenance of Matriculation \$1,070.00 per semester

ADDITIONAL FEES PAYABLE BY STUDENTS (APPLICABLE ONLY TO PART-TIME STUDENTS):

Excess Contact Hours:

New York State Residents \$65.00 per contact hour

Non-New York State Residents \$85.00 per contact hour

NON-NEW YORK STATE RESIDENTS, INCLUDING FOREIGN STUDENTS:

Full-time students: \$500.00 per credit

plus \$55.00 (Student Activity Fee) per semester

and \$15.00 (Consolidated Fee) per semester

and \$75.00 (Technology Fee) per semester

Part-time students: \$500.00 per credit

plus \$35.00 (Student Activity Fee) per semester

and \$15.00 (Consolidated Fee) per semester

and \$37.50 (Technology Fee) per semester

*Tuition and fees are subject to change by action of the Board of Trustees of the City University of New York.

NONINSTRUCTIONAL FEES

Graduate Application Fee \$125 Nonrefundable

Student Activity Fee \$55 Full-time (Fall and Spring)

\$35 Part-time (Fall and Spring)

\$30 (Summer Session)

Technology Fee \$75 Full-time (Fall and Spring)

\$37.50 Part-time Fall and Spring)

Consolidated Service Fee (all students without exception)..... \$5

Maintenance-of-Matriculation Fee

(required to maintain academic status):

New York State residents..... 630

Out-of-state residents..... 1,070

Special Examination Fee: When make-up final exam for one course is taken after scheduled final class exam..... \$15

Each additional makeup exam taken during that semester..... \$5

Transcript-of-Record Fee \$4

(NOTE: No fee is charged for transcripts sent between City University units.)

Duplicate Bursar Receipt..... \$5

Duplicate CUNY Card \$10

Duplicate diploma or certificate in lieu of a duplicate diploma..... \$15

Qualifying Examination Fee (for granting credit for courses taken outside CUNY or for pre- or

corequisites waived for required courses, per exam) \$15

Cooperating Teachers Fee \$25

Change-of-Program Fee (for students who change their schedule of classes after it has been approved

and recorded) \$10

Late-Registration Fee \$15

Nonpayment Service Fee (for students who are delinquent in making payment of any amount due

after the scheduled due date) \$15

Readmission Fee..... \$10

(NOTE: Students who apply to return to the College after an absence of one semester or more (exclusive of summer session) are required to pay this fee to be readmitted to the same unit. The charge is

applicable whether or not a student has taken a formal leave of absence. Not applicable to students who have paid graduate Maintenance-of-Matriculation fees for semesters during which they did not

take courses. Readmission is only for Matriculated students.)

Payment Reprocessing Fee..... \$15

(Charge for those students who have previously submitted checks payable to the College that were not honored by their banks: students who do not make a check good by a given date will be required to satisfy

their obligations and pay the applicable reprocessing fee plus a nonpayment service fee.)

Cooperating teachers may be granted tuition waivers of up to 6 credits (two valid certificates) per semester, limited to a maximum of 18 credits. For courses for which tuition is waived,

charges for excess contact hours are also waived.

Tuition waivers may be granted to residents and nonresidents and are applicable to graduate courses and undergraduate courses. (They are exempt from payment of the Student Activity Fee, but must pay the Consolidated Service Fee and Technology Fee.)

Cooperating teachers who take credits in excess of those waived are required to pay tuition at applicable regular rates for the additional credits.

All Fees are currently under review by the University.

MISCELLANEOUS COLLEGE CHARGES

PARKING FEES

Cars/Motorcycles:

Day or Evening Session: \$45 per semester

Summer Session: \$20

Purchase permit in 080 Shuster Hall.

Breakage: As per damage

Loss of Key: \$1.75 (Shuster 031)

Loss of Equipment/Supplies: List Price

LIBRARY FINES

Overdue Books:*

General Circulation: 10¢ per day

Reserve: 17¢ per minute with a maximum fine of \$5.00

Study Rooms: after initial two-hour period, fines accrue at 17¢ per minute thereafter

Damaged Books: Based on amount of damage, not to exceed replacement cost plus \$5 processing charge.

Lost Books: Replacement cost plus a maximum of \$15 processing charge

Overdue charges are not applicable for days on which the Library is closed.

Overdue charges are applicable to lost or damaged books.

*Subject to change

SPECIAL REQUIREMENTS ON PAYMENTS

All graduate matriculants and nonmatriculants must pay their tuition, Student Activity Fee, Technology Fee, and Consolidated Fee at the time they register. The amounts per credit and per excess contact hour also apply to undergraduates taking courses for graduate credit. Graduate students taking an undergraduate course pay nondegree undergraduate tuition for that course.

Students who have not met all their financial obligations to the College will not be issued a transcript, certificate, degree, or grade until they have made all outstanding payments. Students will not be allowed to register for a new semester unless they have satisfied all previous financial obligations to the College.

Students who do not make full payment on their tuition and fees and other college bills, and whose accounts are sent to a collection agency, will be responsible for all collection costs, including agency fees, attorney fees, and court costs, in addition to whatever amounts the student owes the College. In addition, non-payment or a default judgment against the account may be reported to a credit bureau and reflected in the student's credit report.

THE CITY UNIVERSITY OF NEW YORK POLICY ON WITHHOLDING STUDENT RECORDS

Students who are delinquent and/or in default in any of their financial accounts with the College, the University, or an appropriate State or Federal agency for which the University acts as either a disbursing or certifying agent, and students who have not completed exit interviews as required by the Federal Perkins Loan Program, the Federal Family Education Loan Programs, the William D. Ford Federal Direct Loan Program, and the Nursing Student Loan Program, are not to be permitted to complete registration, or issued a copy of their grades, a transcript of academic record, certificate, or degree, nor are they to receive funds under the Federal campus-based student assistance programs or the Federal Pell Grant Program unless the designated officer, in exceptional hardship cases and consistent with Federal and State regulations, waives in writing the application of this regulation.

REFUNDS

By action of the Board of Trustees of The City University of New York, the following regulations govern remission of tuition and fees:

REFUNDS OF FEES

The Student Activity Fee, Technology Fee, and Consolidated Fee, or any part thereof are not refundable at any time except when the student's registration is canceled because of withdrawal of a course or courses by the College or the student totally withdraws prior to the start of classes and is granted a 100% refund of tuition.

REFUNDS OF TUITION

Withdrawal and refund requests should be made in the Office of the Registrar (Shuster Hall, Room 114). The date on which this form is completed and filed, not the student's last day in class, is the official date of withdrawal that serves as the basis for computing a refund.

Non-attendance in classes does not waive the tuition liability a student incurs at registration. Any student who is unable to file for withdrawal from a course in person may do so by mail. The official date of withdrawal will be the date the letter is post-marked.

The interval between a properly executed application for a refund and receipt of a refund check is usually five weeks. Students dropping courses will be refunded according to the dates within this schedule. Students may receive a 100% of tuition refund for voluntarily withdrawing from a class up to, and not including, the first day of classes. The first day of classes is not the first day of THE STUDENT'S class but, rather, the College's opening day of classes for the semester or session.

As a result of the Higher Education Reauthorization Act, students who are recipients of Federal financial aid are subject to one of the following Federal Refund Policies (subject to change):

TITLE IV REFUNDS

Effective Fall 2000, CUNY follows the new Federal regulations on the return of Title IV funds. The College will calculate how much Title IV aid has been earned by the student based upon the period of attendance. The unearned portion of the Title IV funds must be returned to the U.S. Department of Education by the College and the student. For more information, visit the Financial Aid Office, Shuster Hall, Room 136.

All other students are subject to the following tuition refund schedule approved by the Board of Trustees:

<i>Withdrawal (Fall/Spring)</i>	<i>Refund</i>	<i>Summer</i>
Before the first day of classes	100%	
Withdrawal to register at another CUNY college	100%	
Through first week of classes	75%	50%
Through second week of classes	50%	25%
Through third week of classes	25%	None
After the end of the third week of classes	None	

SPECIAL PROVISIONS FOR STUDENTS IN THE MILITARY

The following policies apply to students who leave CUNY to fulfill military obligations.

1) Students called up to the reserves or drafted before the end of the semester:

a. Grades. In order to obtain a grade, a student must attend 13 weeks (five weeks for summer session).

b. Refunds. A student called up to the reserves or drafted who does not attend for a sufficient time to qualify for a grade is entitled to a 100% refund of tuition and all other fees except application fees.

II) Students who volunteer (enlist) for the military:

a. *Grades.* Same provision as for students called up to the reserves. In order to obtain a grade, a student must attend 13 weeks (five weeks for summer session).

b. *Refunds.* The amount of the refund depends upon whether the withdrawal is before the 5th week of classes.

1. Withdrawal before the beginning of the 5th calendar week (3rd calendar week for summer session): 100% refund of tuition and all other fees except application fees.
2. Withdrawal thereafter: 50% refund.

III) Other provisions for military service:

a. *Resident Tuition Rates.* These lower rates are applicable to all members of the armed services, their spouses, and their dependent children, on full-time active duty and stationed in the State of New York.

b. *Re-enrollment of Veterans.* Veterans who are returning students are given preferred treatment in the following ways:

1. Veterans who were former students with unsatisfactory scholastic records, may be readmitted with a probationary program.
2. Veterans, upon their return, may register even after normal registration periods, without late fee.
3. Granting of college credit for military service and armed forces instructional courses.
4. Veterans returning too late to register may audit classes without charge.

c. *Late Admissions.* Veterans with no previous college experience are permitted to file applications up to the date of registration, and are allowed to begin classes pending completion of their application and provision of supporting documents.

d. *Readmission Fee.* Upon return from military service, a student will not be charged a Readmission Fee to register at the same college.

e. *Veterans Tuition Deferrals.* Veterans are entitled to defer the payment of tuition pending receipt of veterans' benefits.

f. *New York National Guard Tuition Waivers.* Active members of the New York National Guard, who are legal residents of New York State and who do not have a baccalaureate degree, are eligible for a tuition waiver for undergraduate study.

REFUND OF TUITION AND FEES TO TAP AND OTHER FINANCIAL AID RECIPIENTS

Students who withdraw during the refund period and have been awarded a full New York State Tuition Assistance Program (T.A.P.) entitlement may elect to use their entitlement as credit toward their current financial liability and, consequently, will forfeit one semester of T.A.P. eligibility; or they may elect to return their T.A.P. award to the Corporation (advantageous only if a small liability is incurred), retain the semester's T.A.P. eligibility, and reimburse the College for any money due.

- Students who withdraw during the refund period with partial T.A.P. entitlements that are not large enough to cover their tuition liability will be required to pay the difference.
- Students awarded financial aid who change their status from full-time to part-time and vice versa must visit the Financial Aid Office, which will adjust their award.
- Students who withdraw after the refund period may relinquish their T.A.P. entitlement and remaining financial aid award for the withdrawn semester.

COURSES WITH CREDIT EQUIVALENT HOURS

Lehman College courses generally carry a credit value equal to the number of weekly contact hours. In certain courses—generally developmental or compensatory in nature—the number of weekly contact hours may exceed the credit value. These additional contact hours are designated “credit equivalents” or “equated credits.” For courses with credit equivalents, tuition is charged on the basis of contact hours and not of credits. Even if a course offers no credit, it is nevertheless billed according to contact hours. The maximum semester rate applies to these courses alone or in combination with credit-bearing courses.

Financial Aid Programs and Requirements

Information on financial aid is available at www.lehman.edu/financialaid or in the Financial Aid Office (Shuster Hall, Room 136). Both full-time and part-time matriculated graduate students are eligible for a limited number of financial aid programs. Full-time graduate students are those registered for at least 12 credits (or the equivalent) per semester. Part-time students are those registered for at least 6 graduate credits per semester.

All financial assistance awards are subject to student compliance with Federal, State, and/or College regulations concerning satisfactory academic progress and academic standing. For more information, visit www.lehman.edu/financialaid.

Financial Aid is available, in various forms, to full- and part-time undergraduate degree students. Information on application procedures and eligibility requirements may be obtained in the Financial Aid Office, located in Room 136 of Shuster Hall. Call 718-960-8545 or e-mail financialaid@lehman.cuny.edu.

NEW YORK STATE PROGRAMS

Tuition Assistance Program (TAP). Only full-time (12 or more credits) graduate matriculants are eligible for this program. To apply for T.A.P., students should complete a Free Application for Federal Student Aid (F.A.F.S.A.) and the H.E.S.C./T.A.P. Form. Applications are required annually. Application is made by filing a Free Application For Federal Student Aid (F.A.F.S.A.) via the Internet at www.fafsa.ed.gov. Lehman College's Federal Title IV code is 007022. Additional information may be obtained in the Financial Aid Office, Shuster Hall, Room 136, or at www.lehman.edu/financialaid.

The Federal Direct Loan Program provides loans for graduate students who are enrolled for courses totaling at least 6 credits per semester. The maximum amount granted per year is \$8,500. Students must first file a F.A.F.S.A. Form. An application and additional information may be obtained in the Financial Aid Office, or at www.fafsa.ed.gov.

Graduate Assistantships are awarded on the basis of academic ability and achievement. The duties of graduate assistants may include teaching, research, laboratory work, and similar assignments as specified by the student's academic department. Students who are interested in an assistantship should consult the appropriate department chair.

FEDERAL PROGRAMS

Federal Perkins Loan Program: Application is made through the Financial Aid Office by filing a F.A.F.S.A. Application. Loans are available to students enrolled with at least 6 or more graduate degree credits. Repayment is at 5% interest and begins six months after graduation or departure from school, and may extend over a period of ten years. NOTE: Students whose Perkins loans have been discharged in bankruptcy are not eligible to receive any further Perkins loans. For more information please go to www.lehman.edu/vpstud/finaid/.

Federal Work-Study Program (F.W.S.P.): Application is made through the Financial Aid Office by filing a paper Free Application for Federal Student Aid (F.A.F.S.A.) or at www.fafsa.gov. The applicant must be enrolled in courses totaling at least 6 graduate degree credits. Students may work up to 20 hours per week when classes are in session.

Veterans Administration (V.A.) Educational Benefits: Application Procedures. Application forms are available at all V.A. offices, active duty stations, and American embassies. Completed forms are submitted to the nearest V.A. office. In New York City, the Department of Veteran Affairs is located at 245 W. Houston Street, New York, NY 10001.

Educational Programs: The most important categories of Department of Veterans Affairs educational assistance programs are as follows: (a) Montgomery G.I. Bill-Active Duty (Chapter 30), (b) Montgomery G.I. Bill-Selected Reserve (Chapter 106), (c) Veterans' Educational Assistance Program (Chapter 32), (d) Survivors' and Dependents' Educational Assistance Program (Chapter 35), and (e) Rehabilitation (Chapter 31).

Eligibility requirements, entitlements, time limits, and programs of education vary somewhat among the programs identified above. Veterans with questions may consult the Office of the Registrar, Shuster Hall, Room 114.

Supplemental Education Benefits: Tutorial assistance, work-study benefits, V.A. educational loans, and emergency loans are available to eligible veterans. Applications should be secured from the V.A. The Veterans Affairs Office is located in the Office of Student Affairs, Shuster Hall, Room 205.

Campus Facilities and Resources

Academic Facilities

Fine and Performing Arts Facilities

Student Life Facilities, Programs, and Services



Academic Facilities

THE LEONARD LIEF LIBRARY

The Leonard Lief Library is housed in a modern, four-story building, with an online catalog and circulation system (CUNY+) and access to over 65 networked electronic periodical indexes and full-text databases. More than 150 state-of-the-art computer workstations are available for student use, most with full Internet access. The Library's home page (www.lehman.edu/provost/library/index.htm) provides links to CUNY+, licensed electronic resources, and websites of interest to researchers. These electronic resources are available to the Lehman community from off-campus as well as on-campus locations. All that is required is an Internet connection and a currently validated Lehman College I.D.

The open-stacks book collection of 572,000 volumes is supplemented by 713,500 microforms and a growing collection of 5,391 films and videotapes. The Library subscribes to 1,535 print periodicals and over 13,000 electronic journals. It is a designated depository for State and Federal government documents. The Library collection supports course work on undergraduate and graduate levels. Interlibrary loan and electronic document delivery are available to support research by graduate students and faculty.

In addition to general and specialized non-circulating reference collections, the Library has a well-used reserve collection that includes current textbooks. Specialized service areas include a periodicals room, laboratory classrooms equipped with audiovisual and computer equipment, and the Bronx History Archives. The Library's state-of-the-art computer labs are used both as classrooms for research training and as open labs providing students with access to the Internet, word processing, and spreadsheets. The Fine Arts Collection contains an extensive collection of records, music, and multimedia C.D.s, as well as audiotapes and videotapes that can be studied and enjoyed at individual carrels equipped with headphones and video monitors. The Education Library contains K-12 curriculum materials, the ERIC microfiche collection, a special teaching collection of children's books, and computer workstations. The Assistive Technology Center, located on the second floor, provides a variety of specialized computer services available to all.

Reference librarians and student tutors are available to assist students during Library hours. Librarians offer, by appointment and on a drop-in basis, class orientations and bibliographic instruction covering the most important research tools in all areas of the curriculum. Students may register for free workshops in a variety of computer applications.

The Library can seat 1,200 people; attractive lounge areas are scattered throughout the building. A limited number of private study rooms are available for small groups of students who wish to study together. Admission to the Library requires a currently validated Lehman College I.D. Library hours may be obtained by calling 718-960-7766.

COMPUTER AND INSTRUCTIONAL TECHNOLOGY FACILITIES

The College has established a new Division for Information Technology, which oversees the development of I.T. infrastructure and the coordination of I.T. operations and services across the campus. I.T. support for students, staff, and faculty is coordinated through the Technology Coordinators in different divisions and a College-wide I.T. support group in the Department of Information Technology Resources (I.T.R.), and provided by a team of computer and network specialists in specialized department labs, divisional offices, and the centralized I.T.R. facilities.

I.T.R. provides access to centralized computing and related technologies in support of the College's instructional, research, and administrative activities. Lehman's Information Technology Center (I.T.C.) is located on the plaza level of Carman Hall. The facility houses nine PC and Macintosh computer labs for course

instructions, an open lab with over 100 computers for student use, shared printing facilities, multimedia meeting or conference rooms, and a help desk. A dedicated faculty development lab, also managed by I.T.R., is located in the Library.

The entire I.T.C. facility is networked on a high-speed backbone providing access to the Internet and campus network services, including electronic mail, the World Wide Web, and web-based applications, such as the CUNY Portal and its related resources and services; the Blackboard online teaching and learning environment; online course registration and the CUNY Student Information Management System (S.I.M.S.); and remote library and specialized departmental resources. Wireless access to the network is also available throughout the campus. The facility supports two-way interactive video distribution. Access from off-campus is available for many of these resources through an Internet service provider.

Facilities for video conferencing and distance learning are expanding. They include a distance learning satellite broadcast and reception studio/classroom under the auspices of H.E.T.S. (the Hispanic Educational Telecommunications System, of which Lehman College is a founding member); a high-speed video distance learning classroom connected to EdNet (part of New York City's institutional network) and the three public high schools adjacent to Lehman; and a distance-learning classroom with smart whiteboard presentation and video conferencing capabilities (created under the University's Media Distribution System).

Lehman's role as the central hub of the Bronx Information Network also affords Lehman students an opportunity to take advantage of the resources of other educational, medical, and artistic institutions in the Bronx. A systematic effort is the College's under way to convert many of the College's lecture halls and classrooms into technology-enhanced or smart classrooms.

I.T.R. makes available specialized equipment for disabled students. All rooms are accessible for persons with disabilities, and specialized hardware and software for visually or hearing-impaired persons are provided. Students and staff may also use the facilities of the Assistive Technology Center, located in the Library.

Other specialized services and facilities include graphic and scanning services and a media conversion lab to assist faculty in developing electronic-based course materials. I.T.R. staff members provide consulting, documentation, technical assistance, and educational services to the Lehman community.

The Media Technology Group of I.T.R., also housed in Carman Hall, provides equipment and technical aids for the production of media presentations using photography, graphics, films, and slides. A new multimedia technology center opened in 2008. Video and multimedia facilities augment traditional audiovisual services.

In addition to the centralized facilities, individual academic divisions or departments operate computer labs to support discipline-specific applications such as a graphics-based computer lab and a 3-D printing facility in the Department of Anthropology; three Computer Graphics and Imaging Labs in the Department of Art; a cutting-edge Laboratory of Geographic Information Technologies in the Department of Environmental, Geographic, and Geological Sciences; a multimedia language laboratory in the Department of Languages and Literatures; multiple facilities for radio, television, and film productions in the Department of Journalism, Communication, and Theatre; and specialized computer labs in the Division of Education, the Division of Adult and Continuing Education, and the Departments of Biological Sciences, Mathematics and Computer Science, Nursing, and Sociology and Social Work. The Library, the Academic Support Center, the Science Learning Center, the Macaulay Honors College at Lehman, and the Student Leader Computer Center also have significant computer resources available.

Students may request information about I.T. resources and services, including I.T.C hours of operation and technical assistance, by phoning 718-960-7333, sending e-mail to helpdesk@lehman.cuny.edu, or visiting the I.T.R Open Center (Carman Hall, Room 111) or the I.T.R website at www.lehman.edu/itr.

THE LANGUAGE LABORATORY

The Department of Languages and Literatures has one multimedia language laboratory. This computer lab is one of the most technologically advanced computer labs in the CUNY system. The laboratory, which is located in Carman Hall, Room B-37, has twenty-eight networked computers and software programs that correspond to the texts used to study the languages taught at Lehman. The computers in this laboratory have high-speed connection to the Internet, sound cards, headsets, C.D./D.V.D. players, and microphones. In addition, a set of special software programs from Tandberg is installed: Imperata, Divace Solo, and Library Pilot.

- Imperata is used for classroom management. It can be used to monitor student activities, provide mouse/keyboard control/collaboration between a pair of student computers, and share individual computer screens. Additional features include the creation of special files called electronic portfolios. An electronic portfolio contains all of the elements an instructor requires to conduct class sessions in a computer lab: a view of the classroom; lesson plan objectives; relevant links to the Internet or other shared directories; the ability to upload files/folders; and the operations used for managing a classroom in a computer environment.
- Divace (Digital Interactive Audio Video Recorder) allows students/instructors to play audio/video and also to record and author their own audio material.
- Library Pilot functions as a database for online links to language-related websites.

These computers are also linked to a digital video server; students can study from the language software stored on the server and digitally record their voices for oral and audio practice. Accommodation is provided for visually impaired and disabled students. Zoomtext, used to magnify text, is installed on one computer. The software Jaws, used by blind individuals, is installed on one computer. One computer station is designed to accommodate an individual using a wheelchair.

ADVANCED IMAGING LABS

The Art Department, in conjunction with Lehman's Department of Mathematics and Computer Science, has established three advanced imaging labs in the Fine Arts building. One lab (in Fine Arts, Room 047) contains twenty up-to-date Mac work stations with new Epson Flatbed Scanners, a Nikon Supercool Film/Slide Scanner, and a Xerox 7700 color printer. A second lab (in Fine Arts, Room 006) contains fifteen Mac work stations with Epson flatbed scanners. These teaching labs give the students the opportunity to learn digital imaging, desktop publishing, webpage design, computer animation, advanced 3-D modeling, and multimedia interactive programming. In addition, a third lab (in Fine Arts, Room 006), dedicated to advanced student and faculty digital imaging, contains several Macintosh G5 computers and printers and additional high-end digital imaging and large-format printing equipment.

SCIENCE LABORATORIES

Significant research and training facilities are available in the Lehman science departments.

In the **Department of Biological Sciences**, the Phytochemistry Laboratory is a newly renovated facility in Davis Hall (Room 119). It is fully equipped with instruments used for the identification and purification of natural products, including a gas chromatograph, high-performance liquid chromatographs

(H.P.L.C.), and a liquid chromatograph-mass spectrometer (L.C.-M.S.). The Molecular Biology Research Facility contains sophisticated instrumentation for molecular biology, cellular biology, and biochemical research. The equipment includes a D.N.A. synthesizer, H.P.L.C.s, ultracentrifuges, high-speed centrifuges, phosphorimager, scanning spectrophotometers, electrophoresis systems for a protein and nucleic acid analysis and D.N.A. sequencing, and computers for integration with the instrumentation. Bioimaging facilities include a confocal microscope, fluorescence microscopes, and scanning and transmission microscopes. There is a recently built research greenhouse, as well as an older greenhouse, and an animal-care facility.

A Biological Sciences Computer Center opened in 2003 with funds from the U.S. Department of Agriculture, the U.S. Department of Defense, and the State of New York. The laboratory is integrated into the research instruments in the Biological Sciences Department and enables students to learn how to operate state-of-the-art scientific instruments. The Center has real-time videoconferencing capabilities to allow faculty to incorporate research results and access the Internet while teaching courses.

Noteworthy research equipment and facilities in the **Department of Chemistry** include nuclear, magnetic, and electron paramagnetic resonance spectrometers, uv-visible and Fourier transform infrared spectrophotometers, gas and high-pressure liquid mass-spectrometer-interfaced chromatographs, teaching and research labs, and a student computing facility.

The **Department of Physics and Astronomy** is conducting cutting-edge research in nanoscience, quantum optics, and string theory. Undergraduate and graduate students are involved in research that is supported by grants from the National Science Foundation, the U.S. Department of Energy, and the U.S. Department of Defense.

The **Department of Anthropology** houses extensive human and primate osteologic and fossil cast collections. A computer graphics-based student laboratory, established with a National Science Foundation grant, lets students access these collections for virtual study and research. The Department also houses the Metropolitan Forensic Anthropology Team, which advises regional Medical Examiners' offices on cases involving unidentified human remains.

All these departments and researchers have easy access to the academic computing facilities at the College as well as the main-frame computer at the City University Computer Center.

INSTRUCTIONAL SUPPORT SERVICES PROGRAM

The Instructional Support Services Program (I.S.S.P.) is dedicated to facilitating the academic development of Lehman students at both the undergraduate and graduate levels. The Program provides tutoring, workshops, and additional resources to support classroom learning. The I.S.S.P. provides instructional support through the Academic Center for Excellence (A.C.E.), located in the Old Gym Building, Room 205, and the Science Learning Center (S.L.C.), located in Gillet Hall, Room 133. For more information, visit www.lehman.edu/issp.

NEW YORK BOTANICAL GARDEN

Under an agreement with CUNY, a number of staff members of the New York Botanical Garden offer courses in Lehman's Department of Biological Sciences. This arrangement makes specialized material, equipment, and collections available to Lehman students and provides facilities for research under exceptionally favorable conditions. The Museum of the Botanical Garden contains a library of about 65,000 volumes; a herbarium with some three million specimens, which provides excellent opportunities for research in taxonomy, ecology, and phytogeography; and special rooms for the cryptogamic collections. The collection of living plants on the grounds and in the greenhouses provides a wealth of material, with approximately 12,000 species represented.

THE BOOKSTORE

The Bookstore, located on campus between Davis and Carman Halls, provides the required faculty-chosen textbooks and related course materials. It also carries a large line of academic software, a comprehensive trade section of general interest books, and school supplies. The College community may shop for compact discs, select remainder books on sale at up to seventy percent off list price, and purchase Lehman apparel and other products, including snacks, candies, sundries, and soda. Items in the Bookstore are also available for purchase online at www.lehmanbookstore.com.

Fine and Performing Arts Facilities

LEHMAN CENTER FOR THE PERFORMING ARTS

Lehman Center for the Performing Arts' 2,310-seat Concert Hall is the borough's premier performance space. Critics have called it "acoustically perfect." With a modern 2,400-square foot stage and an hydraulic orchestra pit, the Center presents outstanding classical, popular, and folk/ethnic dance, music, and theatre companies from around the world. Special, culturally diverse Community Celebrations enhance the Center's offerings. The Center has also served as the site of numerous public programs and debates of national interest. Lehman students are offered discounted tickets for most events, as well as opportunities to work as ushers and apprentice stagehands. Examples of artists who have recently performed at the Center include: El Gran Combo, Virsky Ukrainian National Dance Company, Smokey Robinson, Jimmy Cliff, Trinity Irish Dance Company, Nickelodeon's Blues Clues Live, and the gospel musical "Your Arms Too Short to Box With God."

LEHMAN STAGES

Lehman Stages is a performance and rehearsal facility at Lehman College, comprised of the Lovinger Theatre, the Studio Theatre, the Student Experimental Theatre (or "S.E.T."), and the Dance Lab @ Lehman. Part of the Bronx for over two decades, the facilities that comprise Lehman Stages have served as an invaluable cultural resource for the Bronx and the larger New York City community. Lehman Stages is dedicated to the creation and presentation of performing arts programming of all disciplines, with a special focus on education and cultural diversity. Lehman Stages aspires to be an artistic touchstone for emerging artists of all backgrounds and a training facility for the College's theatre and dance program. The facilities also provide low-cost rehearsal, performance, and conference space for arts, civic, and government organizations throughout the metropolitan area.

RECITAL HALL

The Music Building houses a 150-seat Recital Hall, which is used by music students and music faculty members throughout the academic year. There are also individual practice rooms for music students, as well as larger rehearsal halls for groups such as the Community Band and Lehman College Community Chorus. Many recitals are given at noontime in the Recital Hall and attended by the public during the lunch hour. The Lehman College Chamber Players, the Lehman College Jazz Ensemble, and the Lehman College Brass Ensemble are among the groups performing noon-time concerts.

LEHMAN COLLEGE ART GALLERY

The Lehman College Art Gallery is located in the Fine Arts Building, designed by renowned architect Marcel Breuer. The Gallery presents innovative contemporary art in two striking exhibition spaces. Education is an integral component of exhibition programming and provides the basis for the Gallery's outreach—from young students to senior citizens. New technologies offer a means of reaching audiences internationally as well as locally

and provide creative new venues for artists. The Gallery's website, featuring Bronx Public Art, highlights an extraordinary collection of public art from the W.P.A. to contemporary projects.

Student Life Facilities, Programs, and Services

OFFICE OF THE VICE PRESIDENT OF STUDENT AFFAIRS

The Office of the Vice President of Student Affairs (Shuster Hall, Room 206) is concerned with all aspects of student life and provides numerous services for Lehman undergraduates, from orientation for incoming students to arranging the College's annual commencement.

The Office is available to assist students with academic and personal issues, as well as to advise student organizations and extracurricular groups. Specialized counselors advise students on questions regarding financial aid (Shuster Hall, Room 136, phone 718-960-8545); personal issues (Old Gym Building, Room 114, 718-960-8761); and job placement, part-time work opportunities, and other career-related matters (Shuster Hall, Room 254, 718-960-8366). Other services are provided through the Registrar's Office, the International Students Office, the Center for Special Student Services, the Student Health Center, and the Child Care Center.

THE APEX

The APEX is a \$57 million recreation and sports facility that provides 165,000 square feet of multidimensional, multipurpose space. It houses the College's intercollegiate and intramural athletics program, as well as classrooms and dance studios for the academic program in dance theatre.

The chief attraction of the APEX—a 50-meter, eight-lane swimming pool—has provided a new level of opportunity for the sport of competitive swimming in the metropolitan area. It is used for both national and international athletic competitions, while also supporting Lehman's many academic, recreation, intramural, and community outreach activities.

The APEX has two gymnasiums, one for intercollegiate athletics with a seating capacity of 1,350, and the other for recreational and intramural use. Other key features of the building include: four racquetball courts, free weight room, cardiovascular fitness center, a training room, an equipment room with laundry facilities, saunas, locker rooms, dance and ballet studios, and an indoor running track.

The College also has five outdoor tennis courts and soccer, softball, and baseball fields. Alumni, College staff, and community members as well as Lehman students may use athletic facilities in accordance with College rules and regulations.

INTERCOLLEGIATE ATHLETICS

Lehman College is a member of the National Collegiate Athletic Association Division III, the City University of New York Athletic Conference, the North East Collegiate Volleyball Association, the Metropolitan Collegiate Swimming Association, and the Eastern Collegiate Athletic Conference. Students are encouraged to join athletic teams, many of which participate in local league competition. Standards for participation and rules governing the sports are those of the National Collegiate Athletic Association and various local and district conferences. The eligibility requirements for Lehman College are as follows:

- Athletes must be full-time matriculated students, i.e., carrying twelve (12) credits.
 - Athletes must have and maintain a 2.0 index.
- Competition is held in the following: baseball, basketball, cheerleading, cross-country, softball, swimming, tennis, indoor and outdoor track and field, and volleyball. In addition there is

conference, regional, and national championship competition in all intercollegiate programs. City University championship tournaments are conducted in baseball, basketball, cheerleading, cross country, soccer, softball, swimming, tennis, indoor and outdoor track and field, and volleyball.

INTRAMURAL ATHLETICS

The intramural program provides a wide variety of activities of a competitive and recreational nature in which students, staff, and faculty may participate. Organized activities are scheduled throughout the year in men's, women's, and coeducational teams. These are conducted during free hours on Wednesdays from 3 to 5 p.m. and on Fridays from noon to 1 p.m. Supervised recreational facilities are made available as often as possible for informal use by the Lehman College community. The following intramural activities are available: basketball, soccer, softball, swimming, tennis, and volleyball. The Intramural-Recreation Office is located in Room 253 of the APEX.

RECREATION OPPORTUNITIES

Supervised hours for recreation within the APEX pool, fitness center, auxiliary gym, aerobics room, and racquetball courts are provided as often as possible for informal use by faculty, staff, and students. The schedule for these facilities varies somewhat from semester to semester and may be obtained in Room 251, APEX. The APEX is open Mondays through Fridays during the academic year from 7 a.m. until 10 p.m. On Saturday, the building is open from 8 a.m. until 5 p.m., and on Sunday from 9 a.m. until 2 p.m. Students may use the APEX free of charge; for others, a yearly membership fee is required. Additional information and use schedules are available in Room 251 or by calling 718-960-1117.

THE OFFICE OF CAMPUS LIFE

The Office of Campus Life, located in the Student Life Building, implements a comprehensive student development program that complements the academic experience. Programs include an annual Leadership Development Retreat for student officers, a Community Service Fair, and biannual blood drives, as well as special interest seminars and receptions.

The Office also serves as a resource for all student clubs funded through the student activity fee. In association with C.A.S.A. (Campus Association for Student Activities) and the Programming Board, the Office promotes thematic programs such as Black History Month, Women's History Month, and Latino Heritage Month. Activities within these programs range from concerts to poetry readings. Staff of the Office are available to all matriculated students who might be interested in existing or new student clubs.

The Student Life Building is a two-story facility that contains thirty-two student club offices, the campus radio station WHLC, and other facilities. Adjacent to the south baseball field, the building is open from 9 a.m. until 9 p.m. Monday through Thursdays and from 9 a.m. until 5 p.m. on Fridays. Matriculating students are welcome to use the game room, TV room, student lounge, or conference rooms. On the upper level, a copying/fax service is available to all members of the Lehman community. Student club members are also free to use the computer resources for creating club posters and announcements. A wireless network and laptop rental program is available to registered students.

THE CAFETERIA

The Student Cafeteria's contract operator offers food and catering services to the Lehman College community. Hot and cold dishes are available at moderate prices from 7:30 a.m. to 8:45 p.m. Monday through Thursday, and from 7:30 a.m. to 3:30 p.m. on Friday and Saturday. Schedules vary when class is not in session. Current schedules may be obtained by calling 718-960-1175.

The main student cafeteria, in the lower level of the Music Building, has a seating capacity of 800. A café is located in Carman Hall and serves fast food and casual meal items. The hours of operation for the café are the same as those of the student cafeteria. For the convenience of students, a varied selection of vending machines is also available both in the Carman Hall Café and the Student Cafeteria.

THE OFFICE OF CAREER SERVICES

The Career Services Center (Room 254, Shuster Hall, 718-960-8366) assists students in preparing for the realities of the workplace and acquiring employment after graduation. Through its computerized online listings and postings, students have access to full-time positions in private, public, and non-profit organizations. The Center also provides students with expanded services through its state-of-the-art computer lab, which includes interactive career assessment programs and online information systems.

The Career Services Center offers individual career counseling, job readiness workshops (résumé writing, interviewing, job search strategies), job referrals, internship opportunities, and on-campus recruitment activities with various employers.

THE FINANCIAL AID OFFICE

Located in Room 136 of Shuster Hall, the Office of Financial Aid assists students with all aspects of financing their education, including planning and meeting the expenses associated with attending the College. Information is available on financial assistance programs and on how to maintain eligibility for Federal, State, and City award programs. Financial Aid professionals will work closely with students and their families to put the cost of a Lehman education within reach.

The Office also provides students with expanded services through a computer lab, located in Shuster Hall, Room 131. Students may use the lab to access and complete various online financial aid-related applications. For more detailed information, visit www.lehman.cuny.edu/financialaid.

THE SPEECH AND HEARING CENTER

The Speech and Hearing Center provides diagnostic and therapeutic services to members of the Lehman community and the surrounding region who have hearing or speech-language problems. Services are delivered by graduate-student clinicians under the close supervision of speech language pathologists and audiologists who are certified by A.S.H.A. (the American Speech-Language-Hearing Association) and licensed by New York State.

Located in the Speech and Theatre Building, the Center is well equipped to deliver a wide range of diagnostic and therapeutic services. The clinic operates during the academic year. Students test hypotheses on the patient population, as well as develop diagnostic and therapeutic skills. The clinic has units for individual and group therapy, and facilities for student research. Devices for assisting the hearing impaired are available for evaluative purposes.

THE STUDENT HEALTH CENTER

The Student Health Center is located in the T-3 Building, Room 118. The center offers a wide range of services, including: primary and acute care and treatment, urgent care, women's health services, required and elective immunizations, and annual, athletic, and job physicals. Basic laboratory services and pharmaceuticals are also available. Health awareness outreach is a key focus.

The Student Health Center is supported by the student activity fee and, therefore, most services are free or are offered at a significantly reduced cost.

Office hours during the academic year are Monday, Thursday, and Friday from 9 a.m. until 5 p.m., and Tuesday and Wednesday from 9 a.m. until 6:30 p.m. A mid-level practitioner is available at all times. Students with valid I.D.s may use the

services of the Center on an appointment basis. Sick walk-in patients are accommodated. For additional information and appointments, call 718-960-8900.

THE COUNSELING CENTER

Individual counseling services and group workshops are available to all undergraduate and graduate students. Trained professionals and peer counselors offer confidential assistance with personal obstacles to growth, including difficulties with academic performance; anxiety; time and stress management; depression; family and relationship problems; disordered eating; substance abuse and alcoholism; and other issues of everyday life. Day or evening appointments may be arranged by contacting the Counseling Center at 718-960-8761 or by visiting the Center (Old Gym Building, Room 114).

THE CHILD CARE CENTER

The Lehman College Child Care Center is located in the T-3 Building, Room 115. It has two spacious classrooms and a well-designed, enclosed outdoor play area. The Center is licensed by the New York City Department of Health, Bureau of Day Care, and accredited for over ten years by the National Association for the Education of Young Children. Childcare services during the day are provided for two-to-five-year-olds.

Evening programs for children aged five to nine are available to parents attending evening classes at Lehman. Students enrolled in Saturday classes may enroll their four-to nine-year-old children in the Center's Saturday program. Enrollment is based on available spaces and dated applications from a waiting list. The Center has also begun a Sunday program for parents taking classes or involved in other campus activities, such as tutoring or study groups.

Students interested in additional information about the Center, including current rates for full-time and part-time childcare, as well as for the after-school and weekend programs, should call 718-960-8746 for more information.

SPECIAL STUDENT SERVICES

The Office of Special Student Services provides accommodations to Lehman students who provide documentation of a disability. The services include, but are not limited to: advocacy and advisement, assistance during registration, individual test administration, library assistance, tutoring and note-taking, provision of technical equipment, and referrals to outside agencies. In providing these services, the Office arranges for the hiring of trained specialists, such as sign language interpreters, note-takers, tutors, scribes, readers, proctors, and a learning disability specialist.

In addition, specialized technical equipment is available for a wide range of special needs. This equipment includes the following assistive technology: computers, special software such as ZOOM TEXT (enhances print on the computer monitor), JAWS (vocalizes typed material), tape recorders, talking calculators, and reading machines. The Office of Special Student Services is located in Shuster Hall, Room 238, 718-960-8441, TTY 718-960-8931. For more information, visit www.lehman.edu/vpstud/spstudentserv.

INTERNATIONAL STUDENT SERVICES

The International Student Adviser's office is located in Shuster Hall, Room 210. The International Student Adviser provides assistance with immigration matters as they apply to students in F and J visa status. The Bureau of Citizenship and Immigration Services' Certificate of Eligibility will be provided to international students upon completion of all admission requirements and receipt of the required financial documents. The Certificate of Eligibility (I-20) is issued only after an international student has been admitted into a full-time degree program and has documented sufficient financial resources to study and live in the United States. For additional information, telephone 718-960-7274 or email Anne.O-Sullivan@lehman.cuny.edu.

Academic Programs and Courses

Course Offerings

Levels & Codes

Listing of Courses



Curricula and Course Offerings

Lehman College courses are identified by a three-letter abbreviation (known as an "Alpha Code"), followed by a three-digit number. The letters designate the subject area.

Courses in the Biological Sciences may have decimals after the three-digit number.

Doctoral courses in the Biological Sciences carry the four-letter designation "BIO U."

Cross-Listed Courses

A cross-listed course is one that is administered and offered jointly by two (or more) departments. There is only one syllabus for the course.

An example of how these courses are listed by the two (or more) departments is the following:

HEA 625 (FCS 674): Seminar in Human Sexuality

FCS 674 (HEA 625): Seminar in Human Sexuality

The department in which the course is to be credited for each particular student is decided at the time of registration for the course and is so indicated on the student's record. This designation may not be changed subsequently.

COURSE LEVELS

- **500 level:** Courses on this level are graduate courses for students with undergraduate majors in a different discipline.
- **600, 700, and 800 levels:** Courses on these three levels are graduate courses for students who have completed at least 18 credits of undergraduate work in the area of graduate specialization.

The levels are distinguished as follows:

- **600 level:** Graduate courses open to qualified undergraduates.
- **700 level:** Graduate courses intended primarily for master's degree candidates.
- **800 level:** Courses intended primarily for doctoral candidates. The letter "U" preceding an 800-level course indicates that that course has been approved as part of City University's doctoral curriculum.

NOTE: Selective courses listed in each department or program may not be given in academic years 2009-2010 and 2010-2011. For more information, contact the department or check the Schedule of Classes distributed prior to each semester.

Index of Course Abbreviations (Alpha Codes)

COURSE ABBREVIATION	PROGRAM
ACC	Accounting
ANT	Anthropology
ART	Art
ARH	Art History
AST	Astronomy
BIO	Biological Sciences
BIOCHEM	Biochemistry
BIO U	Biological Sciences (Doctoral Level)
CHE	Chemistry
CLA	Classics
CMP	Computer Science
DFN	Nutrition
EBS	Bilingual Special Education
ECO	Economics & Accounting
EDC	Early Childhood Education
EDE	Elementary Education
EDG	Guidance & Counseling
EDI	Educational Media
EDL	Educational Leadership
EDR	Reading (Teacher Education)
EDS	Special Education
ENG	English
ESC	Middle & High School Education
ESS	Special Subjects (Teacher Education)
FCS	Family & Consumer Studies
GEH	Human Geography
GEO	Geology
GEP	Physical Geography
HEA	Health Education
HIS	History
ITA	Italian
MAT	Mathematics
MLS	Liberal Studies
MSH	Music History
MSP	Music Performance
MST	Music Theory
NUR	Nursing
PHE	Public Health
PHY	Physics
POL	Political Science
PRS	Puerto Rican Studies
PSY	Psychology
REC	Recreation
SOC	Sociology
SWK	Social Work
SPA	Spanish
SPE	Speech
THE	Theatre

Anthropology

Chair and Adviser: Vincent H. Stefan (Davis Hall, Room 411/421-A)
Department Faculty and Staff: Professors: Eric Delson, Anthony L. LaRuffa; Associate Professors: Louis Flam, Christa Salamandra, Victoria Sanford, Vincent H. Stefan; Assistant Professors: William E.H. Harcourt-Smith, Ryan Raaum, Stephanie Rupp; Senior College Laboratory Technician: Salah Noueihed

The Department of Anthropology offers courses of interest to people with bachelor's degrees who are pursuing a variety of careers, including teaching, the health professions, museum work, and business.

COURSES IN ANTHROPOLOGY

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

***ANT 501: Principles of Anthropology.** *3 hours, 3 credits.* (For students who have had no previous course work in cultural anthropology.) General introduction to the various fields of anthropology. Discussion of basic anthropological concepts. Comparative study of cultural and societal components, such as the economy, kinship, social groupings, political organization, religion, and ideology.

***ANT (SOC) 510: Culture and Education.** *3 hours, 3 credits.* Education and child training in selected societies. The bearing of the principles of social anthropology on contemporary problems of education.

***ANT (SOC) 520: Interculture Relations.** *3 hours, 3 credits.* Analysis of diverse cultural patterns; nature of culture change, directed and nondirected; critical examination of case studies.

ANT 525, 530, 535, 540, 545, and 555: Ethnology of Selected Areas. *Each 3 hours, 3 credits.* The comparative study of cultures and societies. Analysis of ecological, economic, sociopolitical, and ideological systems.

North America

Latin America

Africa

Middle East

India

Southeast Asia

ANT (PRS) 550: Comparative Study of Puerto Rican Cultures. *3 hours, 3 credits.* Ethnographic analysis of modern communities in Puerto Rico; effects of urbanization, industrialization, and tourism. Comparative analysis of Puerto Rican culture in New York, and evaluation of the educational process in each culture.

ANT 560: Introduction to Museology. *3 hours, 3 credits, plus museum work to be arranged.* Study of the museum field, including the concept and functions of the neighborhood museum; restoring and preserving material; assembling, planning, installing, and labeling exhibits; and training in gallery talks and lectures.

ANT 570: Human Evolution. *3 hours, 3 credits.* Origin and development of the order Primates, with special emphasis on hominid evolution.

ANT 580: Ethnographic Field Methods. *3 hours, 3 credits.* Training in the techniques of ethnography, including observation and interviewing, through classroom and individual projects. PREREQ: ANT 501 or undergraduate course in introductory anthropology.

***ANT 630: Culture Change.** *3 hours, 3 credits.* Anthropological analysis of rapidly changing sociocultural conditions in selected societies.

ANT 650: Language, Culture, and Society. *3 hours, 3 credits.* The anthropological study of language. Study of the situational, social, and cultural meanings of messages and message forms. The ethnography of communication. PREREQ: ANT 501 or permission of instructor.

ANT 651: The Anthropology of Literacy. *3 hours, 3 credits.* Examination from an anthropological perspective of the origins and development of writing systems and of literacy practices in Western and non-Western societies. Topics include: oral vs. literate societies; debate over the social, cultural, and cognitive consequences of literacy; ethnographic approaches to literacy acquisition and development. PREREQ: ANT 501 or permission of instructor.

Art

Chair: Charles J. Seplowin (Fine Arts, Room 014)

Graduate Advisor: Melissa Brown

Department Faculty and Staff: Professors: George Corbin, David Gillison; Associate Professors: Flavia Bacarella, Herbert Broderick, Michael Ferraro, Charles Seplowin, Terry Towery; Assistant Professors: Melissa Brown, Sean McCarthy, Dannielle Tegeger; Lecturer: Janet Skolnik; Senior College Laboratory Technician: John Belardo; College Laboratory Technician: David Schwittek

The Department of Art offers three graduate degree programs: Master of Arts in Art, Master of Fine Arts in Art, and Master of Arts in Art Education (N-12).

M.A. PROGRAM IN ART

Admission Requirements

- Bachelor's degree (or its equivalent) from an accredited college or university.
- Demonstrate the potential to pursue graduate study successfully, that is, by having attained a minimum undergraduate grade average of B in Art courses and a minimum grade average of B- in the undergraduate record as a whole.
- Have earned a minimum of 33 undergraduate credits in art. This total must include one 3-credit survey course in art history and 6 additional credits in Art History.
- Complete an interview with the Department and submit a portfolio and/or photographs or slides of recent student work.
- Submit two letters of recommendation from college instructors.
- If conditionally admitted, satisfy the conditions within one year.
- Personal Interview. An appointment for a personal interview with the graduate coordinator and adviser can be made through the Art Department Office after the application for admission has been filed and approved. Applicants must then present examples of their work—either originals, photographs, or color transparencies—for final approval.

Degree Requirements

Students are required to select an area of specialization from either painting, graphics, sculpture, or digital media. They must earn 12 credits in their area of specialization, 6 credits in elective courses, and 9 credits in Art History. In addition, master's project ART 746 must be taken in the student's area of specialization for 3 credits during the final semester in the program. The electives will be selected (in consultation with the Graduate Adviser) from among ART 702-704, 710, 738-740, 742, and from courses in painting, graphics, and sculpture (in those areas outside the student's own specialization).

Students are required to elect the following areas as part of the first 18 credits toward the M.A. degree: 6 credits in Art History (any of the offerings), 6 credits in electives, and 6 credits in their area of specialization. After a student has completed the first 18 credits in the program, the Art Department will conduct a review of the work and determine the student's ability to continue in the M.A. program.

M.F.A. PROGRAM IN ART

A Master of Fine Arts (M.F.A.) in Art degree is offered in digital media, graphics, painting, and sculpture. This program is intended for students who have demonstrated ability for independent work of high quality in one of the four fields.

Admission Requirements

- Bachelor's degree (or its equivalent) from an accredited college or university.

- Demonstrate the potential to pursue graduate study successfully, that is, have attained a minimum undergraduate grade average of B in Art courses and a minimum grade average of B- in the undergraduate record as a whole.
- Have earned a minimum of 33 undergraduate credits in Art. This total must include one 3-credit survey course in Art History and 6 additional credits in Art History.
- Complete an interview with the Department and submit a portfolio and/or photographs or slides of recent work.
- Submit two letters of recommendation from college instructors.
- If conditionally admitted, satisfy the conditions within one year.
- Personal Interview. An appointment for a personal interview with the graduate coordinator and adviser can be arranged through the Art Department Office after the application for admission has been filed and approved.
- Applicants will then need to present examples of their work—either originals, photographs, or color transparencies—for final approval.
- Applicants will be reviewed by the department's M.F.A. Committee.

Upon acceptance, the student and his/her work will be reviewed each semester by the M.F.A. Committee, which is authorized to approve or refuse continued study in the program or to place a student on probation. Each case of probation will be subsequently reviewed at mid-semester.

Degree Requirements

Students must select an area of specialization from among digital media, graphics, painting, and sculpture. They must earn 12 credits in their area of specialization and 12 credits in electives, plus 9 credits in Art History. In addition, Master's Project Art 748 and 750 must be taken in the student's area of specialization for a total of 12 credits in the final two semesters of the program. Electives will be selected (in consultation with the Graduate Adviser) from among Art 702, 704, 710, 738, 740, and 742, and from courses in digital media, graphics, painting, and sculpture (in those areas outside the student's own specialization).

Students must elect the following areas as part of the first 18 credits toward the M.F.A. degree: 6 credits in Art History (any of the offerings), 6 credits in electives, and 6 credits in their area of specialization. Once a student has completed the first 18 credits in the program, the Department will conduct a review of the work and determine the student's eligibility to continue in the M.F.A. program.

M.A. PROGRAM IN ART EDUCATION (N-12)

Admission Requirements

Bachelor's degree (or its equivalent) from an accredited college or university.

- Demonstrate the ability to successfully pursue graduate study. (Above-average academic achievement in general and in the teaching specialization is required.)
- Have earned at least 33 undergraduate credits in Art. This total must include one 3-credit survey course in Art History and 6 additional credits in Art History.
- Complete an interview with the department and submit a portfolio and/or photographs or slides of recent work.
- Submit two letters of recommendation from college instructors.
- If conditionally admitted, students must make up not more than 12 credits of specified undergraduate coursework,

starting in the first semester and finishing in no more than three consecutive semesters.

- Submit scores on New York State's Liberal Arts and Sciences Test (L.A.S.T.).
- Personal Interview. An appointment for a personal interview with the graduate coordinator and adviser can be made through the Art Department Office after the application for admission has been filed and approved.
- Applicants will then need to present examples of their work—either originals, photographs, or color transparencies—for final approval.

Degree Requirements

Students are required to finish between 40-42 credits selected from among 700-level ART courses for a total of 9 credits. In addition, 6 credits in Art History are required, plus 22-24 credits in Art Education and Education courses (ESC 501, ESC 502, ESC 529, EDE 716, ESC 714, ESC 735, ESC 596). Each student will also do a final M.A. thesis project, ART 746 (3 credits). It is recommended that ART 746 be taken concurrently with ESC 735.

COURSES IN STUDIO ART

ART 612: Introduction to Digital Imaging. 4 hours (2, lecture; 2, lab), 3 credits. Introduction to the creation of art and imagery using computers and digital media. Production of a portfolio of images for presentation. (No previous computer experience required.)

ART 613: Two-Dimensional Design for Digital Media. 4 hours (2, lecture; 2, lab), 3 credits. Digital tools for the design and production of two-dimensional graphics and type for the printed page and electronic media. Emphasis on the principles of typography and the history of graphic design and reproduction. PREREQ: ART 612.

ART 621: Computer Modeling and Design: 4 hours (2, lab; 2, lecture), 3 credits. An introduction to the theory and practice of two- and three-dimensional modeling and rendering. Design and mathematical concepts will be explored in the lecture room, on the computer, and in the studio. Topics include primitive objects, transformations, curve creation and manipulation, symmetries, surface creation and modification, and basic rendering. PREREQ: One of the following: ART 612, ART 312, ART (CGI) 221, or permission of the instructor.

ART 622: Computer Modeling and Design II: 4 hours (2, lecture; 2, lab), 3 credits. Advanced surface modeling with consideration of continuity of surfaces and their tangents and curvature. Evaluation techniques, construction planes, and modeling workflow. Creation of computer models from two-dimensional views and three-dimensional models. PREREQ: ART 621 or ART (CGI) 321.

ART 702: Advanced Problems in Design I. 4 hours, 3 credits. A studio for design, with emphasis on contemporary concepts. Students will be given the opportunity to carry out problems in a specialized field of design.

ART 703: Advanced Digital Media I (Interface Design). 4 hours, 3 credits. An advanced studio devoted to the exploration and critical discussion of digital media. Topics may include, but will not be limited to: physical computing; digital imaging; the Internet and the World Wide Web; 3D modeling and animation; multimedia; digital audio; digital video; creativity and technology; information design; interface design; identity design; interaction design; networks; scripting; visualization; and professional development.

ART 704: Advanced Problems in Design II. 4 hours, 3 credits. See ART 702 for description.

ART 710: Advanced Drawing. 4 hours, 3 credits. Study of various drawing techniques and their application to problems in the area of specialization.

ART 712: Advanced Painting I. 4 hours, 3 credits. A studio for painting, with individual criticism. Special attention is given to the creative disciplines of contemporary painting. The studio work is accompanied by discussions of theories and influences of the modern movements in art.

ART 713: Advanced Digital Media II (Interaction Design). 4 hours, 3 credits. This course is an advanced studio devoted to both the exploration and critical discussion of a broad range of digital media and their multiple interactions. PREREQ: ART 703: Advanced Digital Media I (Interface Design).

ART 714: Advanced Painting II. 4 hours, 3 credits. See ART 712 for description.

ART 716: Advanced Painting III. 4 hours, 3 credits. See ART 712 for description.

ART 718: Advanced Painting IV. 4 hours, 3 credits. See ART 712 for description.

ART 722: Advanced Sculpture I. 4 hours, 3 credits. Development of creative expression in sculpture, including research projects in various sculptural media.

ART 723: Advanced Digital Media III (Identity Design). 4 hours, 3 credits. This course is an advanced studio devoted to the design of identity. From simple business logos to entire public relations campaigns, identity design is an area of intense debate and discourse. Exploration and critical discussion of digital media's role in advertising, politics, art, and personal identity are all areas of discussion. PREREQ: ART 703: Advanced Digital Media I (Interface Design).

ART 724: Advanced Sculpture II. 4 hours, 3 credits. See ART 722 for description.

ART 726: Advanced Sculpture III. 4 hours, 3 credits. See ART 722 for description.

ART 728: Advanced Sculpture IV. 4 hours, 3 credits. See ART 722 for description.

ART 730: Advanced Graphic Arts I. 4 hours, 3 credits. Woodcut, black and white; also color printing. Soft-ground and hard-ground etching. Aquatint. Line engraving on metal. Dry point. Color printing with metal: surface printing offset and intaglio color from tradition to the latest experimental methods.

ART 731: Applied Imaging and Applications to the World Wide Web I. 4 hours (2, lecture; 2, lab), 3 credits. Concepts and techniques underlying the World Wide Web, including image processing, two-dimensional graphics, and computer science. PREREQ or COREQ: ART 738.

ART 732: Advanced Graphic Arts II. 4 hours, 3 credits. See ART 730 for description.

ART 733: Advanced Digital Media IV (Information Design). 4 hours, 3 credits. This course is an advanced studio devoted to the conceptual process of information design. It will involve the exploration and critical discussion of a wide variety of digital media. PREREQ: ART 703.

ART 734: Advanced Graphic Arts III. 4 hours, 3 credits. See ART 730 for description.

ART 736: Advanced Graphic Arts IV. 4 hours, 3 credits. See ART 730 for description.

ART 738: Advanced Photography I. 4 hours, 3 credits. Creative and technical aspects of photography: independent projects in camera techniques; darkroom processing and printing.

ART 740: Advanced Photography II. 4 hours, 3 credits. See ART 738 for description.

ART 741: Applied Imaging and Applications to the World Wide Web II. 4 hours (2, lecture; 2, lab), 3 credits. Advanced methods of motion graphics, action Scripts (programming), QuickTime, imagery, sound, interactivity, animation techniques, and design. PREREQ: Permission of instructor.

ART 742: Independent Research. 4 hours, 3 credits. (May be repeated for credit up to a maximum of 9 credits, with Graduate Adviser's permission.) Studio work under guidance of a faculty member. PREREQ: Graduate Adviser's permission.

ART 746: Master's Project. 3 credits (required of all M.A. candidates). Individual project in the student's area of specialization.

ART 748: Master's Project. 6 credits (required of all M.F.A. candidates). Individual project in the student's area of specialization. Credit for ART 748 will not be granted unless ART 750 has been completed.

ART 750: Master's Project. 6 credits (required of all M.F.A. candidates). Continuation of individual project in the student's area of specialization. PREREQ: ART 748.

ART 752: Advanced Two-Dimensional Design for Digital Media. 4 hours (2, lecture; 2, lab), 3 credits. (May be repeated for a maximum 6 credits). Emphasis on two-dimensional design projects for production. Completion of a professional portfolio of projects suitable for presentation. PREREQ: ART 613.

COURSES IN ART HISTORY

ARH 751: Primitive Art. 30 hours plus confs., 3 credits. The art of prehistoric and preliterate peoples, with emphasis on African, Oceanic, and pre-Columbian art.

ARH 753: Modern Art. 30 hours plus confs., 3 credits. Twentieth-century painting and sculpture in Europe and America.

ARH 757: Renaissance Art. 30 hours plus confs., 3 credits. The art of the High Renaissance and the evolution of Mannerism.

ARH 775: Seminar—The Art of Africa. 30 hours plus confs., 3 credits. Selected topics in African art, with emphasis on the form, cultural context, and history of art among various tribal groups south of the Sahara.

ARH 777: Seminar—The Art of the South Pacific. 30 hours plus confs., 3 credits. Selected topics in the art of the South Pacific, with emphasis on the form, cultural context, and history of art among the tribal peoples of Australia, Indonesia, Melanesia, Micronesia, and Polynesia.

ARH 779: Impressionism and Post-Impressionism. 30 hours plus confs., 3 credits. Seminar in a selected topic of Impressionism or Post-Impressionism. Topic will vary in different semesters.

ARH 781: Seminar in Contemporary Art. 30 hours plus confs., 3 credits. Research topics related to recent developments in painting and sculpture.

ARH 783: Independent Research. 15-45 hours, 1-3 credits. Research in art history under the guidance of a faculty member.

ARH 791: Theory and Criticism of Art. 30 hours plus confs., 3 credits. A study of the methods of judging works of art qualitatively in different periods and cultures.

ARH 797: Special Problems in the History of Art. 30 hours plus confs., 3 credits. (May be repeated for credit with Departmental permission.) Seminars in special topics will be announced at the start of each semester in which the course is given.

COURSE IN ART EDUCATION

ESC 735: Curriculum, Research, and Current Issues in Art Education. 3 credits, 3 hours. Contemporary issues and approaches to art education. Research project relates student's art production, curriculum development, and philosophical approach to art education and children's artwork. PREREQ: EDE 734, ESC 714. COREQ: ART 745.

Biological Sciences

Chair: Joseph W. Rachlin (Davis Hall, Room 217)

Adviser: Joseph W. Rachlin (Davis Hall, Room 034)

Department Faculty and Staff:

Professors: Thomas E. Jensen, Edward J. Kennelly, Dwight T. Kincaid, Martin Muntzel, Joseph W. Rachlin, Eleanore T. Wurtzel; Associate Professors: Hai-Ping Cheng, Liesl B. Jones, Zhi-Liang Zheng; Assistant Professors: Gabriel O. Aisemberg, Maryam Bamshad-Alavi, Renuka Sankaran; Chief College Laboratory Technicians: Michael Baxter, Antonios Pappantoniou; Senior College Laboratory Technicians: Katherine Lieberman, Steven Trimboli

- Master of Arts in Biology.
- Master of Arts for Secondary School Teachers of Biology and General Science.
- The City University of New York's Graduate School and University Center offers courses and research training leading to the Ph.D. degree in biology. Students may specialize in zoology or in the plant sciences. The specializations in plant sciences for the University are offered primarily at Lehman College, in affiliation with the New York Botanical Garden. Students in this program may obtain the M.A. as a degree "en route" to the Ph.D. Requirements for admission and further information may be found in the Bulletin of the Graduate School of The City University of New York.

PROGRAM IN BIOLOGY

Admission Requirements

- A bachelor's degree (or its equivalent) from an accredited college or university.
- Demonstrate the potential to pursue graduate study successfully—that is, have attained a minimum undergraduate grade average of B in the field selected for the graduate major and a minimum grade average of B- in the undergraduate record as a whole.
- Have completed a major in biology, chemistry, physics, or an allied field.

With Undergraduate Specialization in Biology:

Candidates whose undergraduate major was in biology must have completed: (1) one year of organic chemistry, with laboratory; (2) one year of college physics; and (3) either one year of calculus or one semester of calculus and a semester of statistics.

With Undergraduate Specialization in Chemistry, Physics, or Allied Field:

Candidates whose undergraduate major was in either chemistry, physics, or an allied field must have completed: (1) the equivalent of an undergraduate minor in biology; (2) one year of organic chemistry, with laboratory; (3) one year of college physics; and (4) either one year of calculus or one semester of calculus and a semester of statistics. In addition, they must submit up to three letters of recommendation and, if conditionally admitted, satisfy the conditions within one year.

Degree Requirements

All students (matriculated or nonmatriculated) should consult with the Departmental Graduate Adviser regarding their programs. The following three tracks toward the Master of Arts degree are available:

- **Independent Laboratory Research (Track A). 30 credits.**

A student may elect to substitute 3 to 6 credits in original laboratory research (BIO 799.1, 799.2, and 799.3) for 3 to 6 credits of coursework. When a student is ready to select a research problem, a research advisory committee of faculty members will be established in consultation with his or her thesis adviser,* to guide the investigation. A thesis based on this research must be defended satisfactorily in an oral presentation prior to its

submission in partial fulfillment of the requirements for the degree of Master of Arts. Approved copies of the thesis must be deposited in the Lehman College Library and the Department of Biology.

**Students who choose a thesis adviser at the New York Botanical Garden or at another institution must have an "in-house" adviser. This individual must be a full-time faculty member of the Department of Biological Sciences at Lehman College and a member of the graduate faculty in biological sciences.*

- **Comprehensive Examination (Track B). 30 credits.**

Students who select this track must complete 30 credits and then must pass a comprehensive examination (which is the CUNY Doctoral Program in Biology's First Examination). Passing this examination will not only meet the requirements for the Master of Arts degree but also qualify the student to proceed into the CUNY Doctoral Program in Biology. A grade of 65 is deemed a passing grade to meet the requirements for the Master of Arts degree, while a grade of 70 is the minimal passing grade that will allow the student to proceed into the CUNY Doctoral Program in Biology (subject to satisfactory meeting of other admission requirements).

- **Tutorial (Track C). 34 credits.**

A student must include 4 credits of tutorial (BIO 792.2) as part of 34 credits required in this track. This tutorial is performed under the supervision of a member of the graduate faculty in Biological Sciences. It is intended to involve the student in the performance of a carefully supervised project. The project may involve research in the laboratory, a library review of relevant topics, or a combination of the two. The results of this project will be written and submitted to the Department of Biological Sciences in partial fulfillment of the requirements of the master's degree. This document will become part of the departmental library.

PROGRAM FOR SECONDARY SCHOOL TEACHERS OF BIOLOGY AND GENERAL SCIENCE

Admission Requirements

- Bachelor's degree (or its equivalent) from an accredited college or university.
- Demonstrate the ability to pursue graduate study successfully. (Above-average academic achievement in general and in the teaching specialization is required.)
- Students in the program for Secondary School Teachers of Biology and General Science must have completed a major in the life sciences. The preparation must include at least 24 credit hours in the biological sciences (appropriately distributed), including an introduction to genetics. Additional required preparation on the college level consists of one year each of chemistry, physics, and mathematics. Advisable college-level preparation includes one year of earth sciences, one course in probability and statistics, and one course in organic chemistry. The candidate must also have completed 12 credits in secondary education courses and one semester of student teaching (or its equivalent).
- If conditionally admitted, students must make up not more than 12 credits of specified undergraduate coursework, starting in the first semester and finishing in no more than three consecutive semesters.
- Up to three letters of recommendation.

Degree Requirements

Students in the graduate curriculum will be required to complete the following minimum work: (1) four courses in the biological sciences; (2) one course in chemistry; (3) one course in physics; and (4) courses totaling 9 credits in secondary education, possibly to be chosen from ESC 700, 701, 702, 703, and/or 772.

Students who have not completed one year of undergraduate earth sciences will take either geology, astronomy, or both.

Additional courses are listed under the Departments of Chemistry, Environmental, Geographic, and Geological Sciences, and Physics and Astronomy. A minimum total of 30 credits must be completed to earn the degree.

M.A. LEVEL COURSES IN BIOLOGY

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

BIO 501: Special Topics in Biology. 2-4 hours, 2-4 credits (variable). (For students whose undergraduate major was not biology.) Basic biological principles and their application to living organisms. This course may be repeated twice with the approval of the Graduate Adviser. PREREQ: One year of college biology.

BIO 610: Mammalian Physiology. 6 hours (2, lecture; 4, lab), 4 credits. Principles of integration and maintenance of homeostasis in mammals, including the activity of the nervous, endocrine, cardiovascular, renal, and digestive systems. Related laboratory experiments.

BIO 611: Problems in Microbiology. 3 hours, 3 credits with lab. (For students who are teaching or plan to teach science or biology in secondary schools.) Reading and projects based on recent developments in microbial cytology, growth, metabolism, variation and dissociation, host/parasite relations, antibiosis, and other associations, e.g., with studies taken from bacteria, fungi, and viruses. PREREQ: One course in bacteriology or microbiology, one year of college chemistry, and one year of college physics.

BIO 612: Plant Growth and Development. 6 hours (2, lecture; 4, lab), 4 credits. A molecular approach to physiological processes in autotrophic organisms, with emphasis on photosynthesis, phytochrome-mediated developmental responses, and hormonal regulation of cell and tissue differentiation.

BIO 618: Problems in Ecology. 6 hours (2, lecture; 4, lab), 4 credits. Recent advances in ecology; population and community interactions; the nature of the niche; endangered species; threats to the biosphere; and possible modes of recovery. Laboratory and greenhouse experiments involving intraspecific and interspecific competition in conspecifics. Fieldwork pertaining to soils and community analyses and to forest dynamics.

***BIO 621: Special Topics in Physiology.** 6 hours (2, lecture; 4, lab), 4 credits. Recent advances in integrative, cellular, and molecular physiology. Areas include information transfer in the cell, enzyme activity, muscle and nerve function, and mechanisms of hormone action. Laboratory work is designed to enable students to acquire skill in relevant biological techniques. PREREQ: One year of college biology (physiology recommended), a half-year of college physics, and one year of college chemistry (organic chemistry recommended).

***BIO 626: Protozoology.** 6 hours (2, lecture; 4, lab), 4 credits. Biology of the protozoa, including morphology, physiology, and systematics of both free-living and parasitic forms. Consideration of phylogeny and ecology, life history, and epidemiology of selected protozoa. Laboratory includes identification, collection, culturing, and straining; emphasis on current techniques and their applications for basic research.

BIO 630: Seminar in Biology. 1 hour, 1 credit. (May be taken twice, to a maximum of 2 credits.) Reports on and discussion of selected topics.

BIO 634: Cell Biology and Electron Microscopy. 6 hours (2, lecture; 4, lab), 4 credits. Structure and ultrastructure of plant and animal cells and cell organelles as revealed by microscopic, electronmicroscopic, cytochemical, and enzyme-cytochemical methods.

BIO 635: Neurophysiology. 3 hours, 3 credits. A general consideration of nervous systems, excitable membrane physiology, synapses, sensory receptors, trophic function, regeneration of nervous tissue, and behavior. PREREQ: One undergraduate course in animal physiology; one year of organic chemistry.

BIO 636: Neurophysiology Laboratory. 4 hours, 2 credits. The laboratory will introduce the students to instrumentation and neurophysiological techniques. The experiments will examine bioelectricity, receptor processes, central processes, behavior, and regeneration. PRE- or COREQ: BIO 635.

BIO 642: Molecular Biology. 6 hours (2, lecture; 4, lab), 4 credits. Structure and function of biological macromolecules. The synthesis of DNA in vitro and in vivo, the transfer of information from DNA to RNA, and the translation of informational RNA into protein. The genetic code and basic principles of molecular genetics will also be included. The laboratory will introduce students to basic techniques in molecular biology, including sterile technique, bacterial growth, gel electrophoresis, restriction enzyme digestion, bacterial transformation, and cloning techniques.

BIO 644: Biological Chemistry. 6 hours (2, lecture; 4, lab), 4 credits. Introduction to the chemistry and metabolism of compounds of biological importance. Studies of carbohydrates, lipids, amino acids, proteins, nucleic acids, vitamins, coenzymes, enzymes, and hormones; their interrelationship with each other; and their metabolism, biosynthesis, and significance in biological systems. PREREQ: One undergraduate course in organic chemistry.

BIO 646: Statistics for Biological Research. 6 hours (2 lecture, 4 lab), 4 credits. Biostatistical principles and methods for experimental biologists. Statistical planning of experiments, collection of data, randomization, elementary factorial analyses, analysis of variation, and regression.

BIO 701: Biological Systematics. 6 hours (2, lecture; 4, lab), 4 credits. A study of the theoretical basis and methodologies of each of the current schools of systematics, and the arguments used by each school in uncovering the phylogenetic relationships between organisms. Topics will include Aristotelian essentialism, evolutionary systematics, phenetics, cladistics (phylogenetic systematics), transformed (pattern) cladistics, monophyly, paraphyly, polyphyly, parsimony, homology, homoplasy, character state analysis, and polarity. The role of paleontological data in phylogenetic reconstruction will be explored. Students will use the methods learned to construct cladograms and phylogenetic relationships from a variety of data sets, and learn how to use data in resolving phylogenetic and biogeographic relationships.

BIO 710: Microbial Physiology. 6 hours (2, lecture; 4, lab), 4 credits. Organization of physiological processes in microorganisms, including structure, energy-yielding mechanisms, macromolecular biosynthesis, growth, and regulation.

***BIO 719: Physiology and Taxonomy of Fungi.** 6 hours (2, lecture; 4, lab), 4 credits. A survey of the major groups of fungi; special problems in fungal physiology; fungi in general physiology; and morphological, ultrastructural, and biochemical approaches to fungal taxonomy and phylogeny. Fungi and human affairs.

BIO 722: Vertebrate Endocrinology. 3 hours, 3 credits. A comparative study of endocrine systems in the vertebrates with special emphasis on neuroendocrinology, and the endocrine control of cellular activities, metabolism, and homeostasis. PREREQ: An undergraduate course in mammalian physiology or in comparative animal physiology.

BIO 724: Cell Physiology. 6 hours (2, lecture; 4, lab), 4 credits. Regulatory and integrative aspects of biochemical processes at the cellular level that contribute to the general and specialized functions of living cells. Representative areas include the cell and its organelles, energy metabolism, and cellular redox potentials; bioelectric phenomena; protein structure and specificity and its relation to cellular differentiations; and membrane structure and transport processes. Lab will include work with intact and cell-free systems to demonstrate physiological and biochemical properties of living cells as well as model systems to demonstrate principles.

***BIO 726: Physiology and Biochemistry of Differentiation.** 3 hours, 3 credits. The factual and hypothetical aspects of protein synthesis. Its relation to cytodifferentiation and the regulation of gene activity is considered from the viewpoint of cellular control mechanisms. Evidence will be considered that selected vitamins, minerals, and cofactors may have critical roles in the regulation of protein synthesis at the level of transcription and translation.

***BIO 740: Virology.** 3 hours, 3 credits. Quantitation, molecular architecture, and chemistry of bacterial, plant, and animal viruses. The physiology of virus-host interactions, with emphasis on viral nucleic acid replication, and the control of viral genetic expression. PREREQ: BIO 642 (or equivalent).

***BIO 744: Special Topics in Biological Chemistry.** 3 hours, 3 credits. Advanced and in-depth studies of specialized topics of current interest in biological chemistry. PREREQ: One graduate course in biological chemistry.

***BIO 746: Biology of Aquatic Organisms.** 6 hours (2, lecture; 4, lab), 4 credits. Biological relationships of aquatic organisms with their freshwater and marine environments, stressing community, population, life histories, and behavior in natural and altered aquatic environments.

BIO 750: Comparative Physiology and Biochemistry. 3 hours, 3 credits. A systematic comparison of the physiological and biochemical phenomena of life throughout the phylogenetic scale.

BIO 792.1: Tutorial. 2 hours, 2 credits. PREREQ: Graduate Adviser's permission.

BIO 792.2: Tutorial. 4 hours, 4 credits. PREREQ: Graduate Adviser's permission.

BIO 799.1: Thesis Research. 1 credit. Independent laboratory investigation. PREREQ: Graduate Adviser's permission. (This course may be repeated with special permission of the Graduate Adviser.)

BIO 799.2: Thesis Research. 2 credits. Independent laboratory investigation. PREREQ: Graduate Adviser's permission. (This course may be repeated with special permission of the Graduate Adviser.)

BIO 799.3: Thesis Research. 3 credits. Independent laboratory investigation. PREREQ: Graduate Adviser's permission. (This course may be repeated with special permission of the Graduate Adviser.)

PH.D. LEVEL COURSES IN BIOLOGY

*Courses preceded by an asterisk are not expected to be offered in 2009-2011.

BIO U706.01: Plant Systematics: Lecture. 2 hours, 2 credits. The philosophical basis of the classification of organisms and the relationships of phylogeny to taxonomy. The nature of species, genera, and higher taxa. The significance of data from various biological disciplines in the establishment of taxonomic systems. The historical development of plant classification.

BIO U706.02: Plant Systematics: Laboratory. 4 hours, 2 credits. PRE- or COREQ: Plant Systematics: Lecture.

BIO U706.05: Taxonomy of Vascular Plants: Lecture. 3 hours, 3 credits. Consideration of current and historical systems of classification of extant tracheophytes at the level of families and higher taxa.

BIO U706.06: Taxonomy of Vascular Plants: Laboratory. 4 hours, 2 credits. PRE- or COREQ: Taxonomy of Vascular Plants: Lecture.

BIO U706.10: Biological Systematics. 6 hours (2, lecture; 4, lab), 4 credits. While the theoretical basis and methodologies of each of the current schools of systematics will be discussed, the course will stress the basis and use of phylogenetic principles (cladistics) for developing topologies of terminal taxa from appropriate data matrices. There will be discussions of the concepts of species, monophyly, paraphyly, polyphyly, parsimony analysis, homology and homoplasy, as well as character selection, character state analysis, and polarity. Students will read classic and current papers from both the botanical and zoological literature to show the modern use of both morphological and molecular data in resolving phylogenetic and biogeographic relationships. Students will learn how to calculate the Wagner Algorithm and to use appropriate computer programs, i.e., WinClada and PAUP, for data analysis.

BIO U710.15: Plant Molecular Biology: Lecture. 2 hours, 2 credits. DNA and protein structure transcription, translation, nuclear and cytoplasmic gene regulation, chromatin structure, transposable elements, plant genetic engineering, plant viruses.

BIO U710.16: Plant Molecular Biology: Laboratory. 6 hours, 3 credits. Students will use plant tissues while learning many basic molecular techniques, such as DNA and RNA hybridization, gene cloning, and chloroplast isolation.

BIO U714.03: Cell Biology. 2 hours, 2 credits. Structure and ultrastructure of plant and animal cells and cell organelles as revealed by microscopic, electron-microscopic, cytochemical, and enzyme-cytochemical methods.

BIO U722.01: Endocrine Physiology. 3 hours, 3 credits. Influence of the endocrine system on membrane transport and cellular processes; endocrine regulation of reproduction, growth, metabolism, and homeostasis.

BIO U722.02: Laboratory in Endocrinology. 6 hours, 3 credits. Modern laboratory techniques used in endocrine research involving surgery on small mammals, radioisotopes, and biochemical methods to follow the action of hormones at a molecular or cellular level. PRE- or COREQ: BIO U722.01.

BIO U730.01: Plant Physiology: Lecture. 3 hours, 3 credits. Physiological phenomena of plants, with emphasis on growth and development. PREREQ: Plant physiology and biochemistry or instructor's permission.

BIO U730.02: Plant Physiology: Laboratory. 6 hours, 3 credits. PRE- or COREQ: Problems in Plant Physiology: Lecture.

BIO U745.01: Phytochemistry: Lecture. 2 hours, 2 credits. Study of the organic constituents of plants. Biosynthetic mechanisms characteristic of plants, with emphasis on those peculiar to plants. Survey of secondary products with emphasis on medically important plant compounds.

BIO U745.02: Phytochemistry: Laboratory. 6 hours, 3 credits. PRE- or COREQ: Phytochemistry: Lecture.

BIO U752: Plant Morphogenesis: Lecture. 3 hours, 3 credits. Theories of plant development based on interpretations of physiological processes, biochemical reactions, and morphogenetic behavior of cells, tissues, and organs undergoing growth and differentiation. The interaction of internal and external factors affecting the development and patterns of growth in plants. PREREQ: Plant physiology and cytogenetics. Recommended: Comparative Morphology of Vascular Plants and Phytochemistry.

BIO U752.01: Plant Morphogenesis: Laboratory. 6 hours, 3 credits. PRE- or COREQ: Plant Morphogenesis: Lecture.

BIO U754.01: Comparative Morphology of Vascular Plants: Lecture. 2 hours, 2 credits. The general organography of the vascular plant. Investigation of forms and structures as related to phylogeny among the tracheophytes, with special emphasis on the comparative morphology and evolution of reproductive structures.

BIO U754.02: Comparative Morphology of Vascular Plants: Laboratory. 6 hours, 3 credits. PRE- or COREQ: Comparative Morphology of Vascular Plants: Lecture.

BIO U761.05: Fishes and Fisheries Biology: Lecture. 3 hours, 3 credits. A study of the statistical methods for the treatment and evaluation of data relevant to the field of fisheries science. Concepts such as the unit-stock, population size, growth, mortality, and maximum sustainable yield will be explored. Students will have the opportunity to treat data by modern microcomputer techniques.

BIO U761.06: Fishes and Fisheries Biology: Laboratory. 6 hours, 3 credits. Students will field collect in both freshwater and marine environments. Collections will be worked up using standard fisheries science techniques to evaluate diet, growth parameters, and population dynamics. Analysis of data will be turned in as a final term project. PRE- or COREQ: Fishes and Fisheries Biology: Lecture.

BIO U761.13: Marine Ecology: Lecture. 2 hours, 2 credits. Examination of ecological processes as they operate in the marine environment. Broad topics will be explored, such as factors affecting primary and secondary production, population dynamics, intra- and specific interactions, resource partitioning in time and space, community structure, and interactions at the community level.

BIO U761.14: Marine Ecology: Laboratory. 4 hours, 2 credits. PRE- or COREQ: Marine Ecology: Lecture.

BIO U762: Physiological Ecology: Lecture. 3 hours, 3 credits.

BIO U762.01: Physiological Ecology: Laboratory. 6 hours, 3 credits.

***BIO U763: Experimental Parasitology: Lecture.** 3 hours, 3 credits. An ecological and physiological approach to the study of host-parasite relationships. Discussion will concentrate on recent advances in the field.

***BIO U763.01: Experimental Parasitology: Laboratory.** 4 hours, 3 credits. Emphasis will be placed on the applications of modern procedure to the study of parasitic organisms. PRE- or COREQ: Experimental Parasitology: Lecture.

BIO U764.03: Plant Ecology: Lecture. 3 hours, 3 credits.

BIO U764.04: Plant Ecology: Laboratory. 6 hours, 3 credits.

***BIO U765.01: Paleobotany: Lecture.** 2 hours, 2 credits. Paleobotanical principles based on geologic evidence and phylogenetic interpretation of paleobotanical materials. The origin of land plants. Morphological and floristic aspects of fossil floras from the Paleozoic on, with emphasis on the Devonian to the Tertiary. Functional and practical problems in paleobotany.

***BIO U765.02: Paleobotany: Laboratory.** 4 hours, 2 credits. PRE- or COREQ: Paleobotany: Lecture.

BIO U770.03: Cytology: Lecture. 2 hours, 2 credits. Micro- and ultrastructure; function; and behavior of organelles of plant and animal cells as revealed by microscopic, electron-microscopic, and cytochemical analysis.

BIO U772.00: Electron Microscopy Cytology: Laboratory. 8 hours, 4 credits. PRE- or COREQ: Cell Biology: Lecture.

BIO U780.01: Mathematical Biology: Lecture. 4 hours, 3 credits. Biometry data analysis and graphics.

BIO U780.02: Mathematical Biology: Laboratory. 4 or 6 hours, 2 or 3 credits. Biometry data analysis and graphics.

BIO U791: Colloquium. 1 hour, 1 credit. Students attend weekly seminars and have discussions with speakers.

BIO U792: Tutorial. 4 hours, 4 credits.

BIO U792.01: Advanced Study. Each semester 2 or 4 hours, 2 or 4 credits.

BIO U793.01, 793.02, and 793.03: Seminar in Special Topics. Each semester 2 hours, 2 credits.

BIO U899: Independent Doctoral Research. 1 credit.

Chemistry

Department Chair: Acting Chair Liesl B. Jones (Davis Hall, Room 315).

Adviser: Andrei Jitianu (Davis Hall, Room 336)

Department Faculty and Staff: Professors: Iraj Ganjian, Marc S. Lazarus, Manfred Philipp, Ralph Salvatore; Associate Professors: John L. Richards; Assistant Professors: Andrei Jitianu, Naphtali O'Connor; Acting Chief College Laboratory Technician: Sharif Elhakem; Senior College Laboratory Technician: Bibi N. Gafur; College Laboratory Technician: Habib Girgis

The Department of Chemistry participates in the Biochemistry, Biology, and Chemistry doctoral programs of the Graduate School and University Center of The City University of New York. A description of these programs, including admission requirements, may be found in the *Bulletin of The Graduate School of The City University of New York*. Nonlaboratory courses are usually given at the Graduate Center. Research leading toward the doctoral degree may be pursued at either Lehman College or any of the other senior colleges of the City University.

COURSES IN CHEMISTRY

CHE 542: Advanced Inorganic Chemistry. 3 hours, 3 credits. A course in modern inorganic chemistry emphasizing the theoretical aspects that should prove useful to high school science teachers. Topics will include atomic theory, ionic and covalent bonding, transition metal chemistry, solvent systems, and acid-base behavior. Concepts will be illustrated with examples from descriptive inorganic chemistry. PREREQ: One year of general chemistry.

CHE 544: Biochemistry. 3 hours, 3 credits. An introduction to the principles of biochemistry. Topics will include the relationship between the three-dimensional structure of proteins and their biological activities; the basic concepts and design of metabolism; biological membranes and compartmentation; nucleic acids and the storage, transmission, and expression of genetic information. PREREQ: Organic chemistry and general biology.

CHE 548: Special Topics in Modern Organic Chemistry. 3 hours, 3 credits. A course designed for high school science teachers who seek to update their background in organic chemistry. Topics will include: the organic chemistry of the origins of life; polymer chemistry; chemistry of pharmaceuticals such as antibiotics, analgesics, steroids, and vitamins; and pheromone chemistry. PREREQ: One year of organic chemistry.

CHE 549: Instrumental Methods of Analysis. 5 hours (lecture, lab), 3 credits. An introduction to the theory and instrumentation used in modern chemical analysis. Topics will include aqueous and nonaqueous acid-base equilibria; ionexchange methods; ion-selective electrodes; mass spectrometry; and selected spectroscopic and electrometric methods. PREREQ: One semester of quantitative analysis or its equivalent.

CHE 560: Selected Topics in Chemistry. 3 hours, 3 credits. This course gives the Department an opportunity to offer a course in chemical demonstrations or various other topics of current importance in chemistry (e.g., spectroscopy, modern theories of chemical reactions, and applications of group theory to chemistry). PREREQ: General chemistry; others as appropriate.

BIOCHEM U711.01: Basic Laboratory Techniques in Biochemistry. 8 hours laboratory, 4 credits.

BIOCHEM U810: Seminar in Biochemistry. 15 hours, 1 credit (maximum 5 credits). Required of all students.

BIOCHEM U820: Research toward the Doctoral Dissertation. Credits variable. Required of all doctoral students. PREREQ: The First Doctoral Examination described in the *Bulletin of The Graduate School of The City University of New York*. Other courses can be found in this same Bulletin.

Counseling, Leadership, Literacy, and Special Education

Chair: Faith Deveaux (Carman Hall, Room B20A)
Coordinators: Stuart Chen-Hayes, Counselor Education (Carman Hall, Room B01). Limor Pinhasi-Vittorio, Literacy Studies (Carman Hall, B17). Barbara Gottlieb, Childhood & Adolescent Special Education (Carman Hall, Room B53). Maria Victoria Rodriguez, Early Childhood Special Education (Carman Hall, B15). Janet DeSimone, Educational Leadership (Carman Hall, Room B53).

Department Faculty:

Professors: Barbara Gottlieb, Gaoyin Qian, Patricia Thompson; Associate Professors: Stuart Chen-Hayes, Faith Deveaux, M. Victoria Rodriguez, Ark Zuss; Assistant Professors: Janet DeSimone, Limor Pinhasi-Vittorio, Laura Roberts; Lecturer: Ara John Bahadourian; Instructor: Tamisha Bouknight

The Department of Counseling, Leadership, Literacy, and Special Education offers the following programs:

Master of Science in Education, Counselor Education

Master of Science in Education, Educational Leadership

Advanced Certificate, Educational Leadership

Master of Science in Education, Literacy Studies: Early Childhood Education

Master of Science in Education, Literacy Studies: Childhood Education

Master of Science in Education, Literacy Studies: Middle and Adolescent Education

Master of Science in Education, Literacy Studies: Adult*

Master of Science in Education, Early Childhood Special Education

Master of Science in Education, Childhood Special Education

Master of Science in Education, Adolescent Childhood Special Education

**The concentration in Literacy Studies: Adult is not expected to be offered in 2009-2011.*

M.S.ED. PROGRAM IN COUNSELOR EDUCATION

Lehman offers a 48-credit graduate program in Counselor Education. Graduates are eligible for School Counselor Certification in New York State and the School Counselor license in New York City. Counseling students are also encouraged to pursue national certification through the National Board of Certified Counselors. Counselor Education faculty and students collaborate in partnership with the Bronx, lower Westchester, and other New York City-based K-12 schools and community agencies.

Students in Counselor Education at Lehman are introduced to a comprehensive body of knowledge. The program focuses on the professional counselor's leadership roles in collaboration with teachers, administrators, families, caregivers, health professionals, community resource networks, and others to promote equity and success for children, youth, and families. School Counselors learn to be advocates for social justice and follow the professional counseling codes of ethics and standards of practice. Interventions made by counselors in school, community, and family systems acknowledge the importance of lifespan development and social change in promoting academic, career, and interpersonal equity and success for all students and families. Students demonstrate professional school counseling, consultation, and leadership competencies throughout their course assignments, at K-12 school-based experiences, including practicum and internship, through a professional counseling portfolio of written and videotaped assignments, and in a school counseling research project.

BILINGUAL SCHOOL COUNSELING EXTENSION **

A 15-credit hour concentration in Bilingual School Counseling beyond the 48-credit hours is offered for students in School Counseling.

***This program is currently not being offered.*

FAMILY COUNSELING EXTENSION

A 15-credit hour concentration in Family Counseling beyond the 48 credit hours is offered for students in School Counseling.

Overview of the Program

- EDG 700 (3), EDG 701 (3), EDG 702 (3), EDG 703 (3), EDG 704 (3), EDG 705 (3), EDG 706 (3), EDG 707 (3), EDG 708 (3), EDG 709 (3), EDG 710 (3), EDG 732 (3), EDG 733 (3), EDG 743 (3), EDG 744 (3), ELECTIVE (3)
- Elective Options (3 credits): EDE 777 (3), EDS 740 (3), EDS 743 (3), ESC 701 (3), EDG 731 (3), EDG 734* (3), EDG 735 (3), EDG 736 (3), EDG 737 (3).
- Bilingual School Counseling Extension* (15 credits): EDG 734* (3), SPE 703 (3), ESC 759 (3), ESC 776 (3), EDG 707 (3).
- Family Counseling Extension (15 credits): EDG 731 (3), EDG 735 (3), EDG 736 (3), EDG 737 (3), EDG 707 (3).

** Not expected to be offered in 2009-2011.*

Note: Students seeking the Bilingual School Counseling or Family Counseling extensions must repeat the EDG 707 practicum with a specific bilingual school or family counseling focus and have completed three courses in the extension prior to practicum placement.

Admission Requirements

Note: Students admitted only beginning in the fall term. Deadline for consideration is April 1.

- A completed bachelor's or master's degree from an accredited institution of higher education and original transcripts from all prior undergraduate and/or graduate institutions.
- A minimum 3.0 G.P.A. from a completed undergraduate or graduate degree program.
- Three letters of recommendation evaluating the applicant's potential as a professional school counselor in areas of leadership, advocacy, collaboration, coordination, counseling, technology, and skills in affirming culturally diverse populations. These letters should be from persons such as college or university faculty, K-12 school personnel, and community and family agency personnel.
- A completed application, including a 1,100-word essay consisting of responses to application-packet questions.
- Current New York State teaching certificate and/or Liberal Arts and Sciences Test (L.A.S.T.) scores for students planning to seek certification. (Note: A teaching certificate is NOT required to become a school counselor in New York State.) Prospective students who are not State-certified teachers and do not plan to seek teacher certification are required to submit Graduate Record Examination (G.R.E.) scores in lieu of L.A.S.T. scores.
- A resume.

Candidates who satisfy the preliminary admissions requirements will be invited to a group interview and be asked at that time to provide a writing sample.

Continuation Requirements

1. Meet with a faculty advisor to plan courses and receive course approvals prior to or during registration each semester.
2. Purchase and maintain liability insurance through the American School Counseling Association or the American Counseling Association at student rates for coverage during pre-practicum, practicum, internship, and fieldwork (or provide proof of appropriate coverage).
3. If conditions were placed on initial matriculation, all conditions must be met by the completion of the first 12 credit hours.
4. 18 credits in beginning counseling courses with a minimum 3.0 G.P.A., a completed practicum supervision agreement form signed by the K-12 practicum placement site supervisor, and permission of the clinical coordinator are required prior to placement in practicum.
5. 36 credits in counseling courses with a minimum 3.0 G.P.A., a minimum of a grade of B in EDG 707, Practicum in Counseling, a completed internship supervision agreement form signed by the K-12 internship site supervisor, and permission of the clinical coordinator are required prior to placement in internship.
6. Demonstrated evidence of counseling, leadership, and advocacy skills through school-based service projects, community service, and local, state, and/or national counseling association participation.

Graduation Requirements

- Completion of 48 approved graduate credits of study in counseling.
- A minimum Grade Point Average of 3.0 (B).
- Successful completion of two semesters of internship.
- Final school counseling research project.
- A portfolio of papers, projects, and taped counseling/consultation sessions as prescribed to meet program requirements.

COURSES IN COUNSELOR EDUCATION

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

EDG 700: Professional Identity in Counseling. 3 hours, 3 credits. History, philosophy, and professional roles of the school counselor, with emphasis on legal, ethical, and equity issues in urban schools and families. A 10-hour prepracticum in a K-12 school is required. PREREQ: Matriculation in the program.

EDG 701: Counseling Theories and Techniques. 3 hours, 3 credits. Systemic and individual theories and techniques of counseling and collaboration with children, adolescents, families, educators, and administrators in K-12 settings. A 10-hour prepracticum in a K-12 school is required. PREREQ: Matriculation in the program.

EDG 702: Multicultural Counseling. 3 hours, 3 credits. Examines theories of multicultural counseling in diverse urban school settings focusing on ethnic/racial identity development, world view, anti-oppression, and social justice models in counseling. PREREQ: EDG 700, 701.

EDG 703: Human Development in Counseling. 3 hours, 3 credits. Examination of child, adolescent, and family development theories in diverse urban school settings, including the application of lifespan developmental theory in counseling practice. PREREQ: EDG 700 and 701.

EDG 704: Career Counseling. 3 hours, 3 credits. Examination of career development theory and technology-based career counsel-

ing practices in diverse urban school settings and the school counselor's role in life-long career and educational planning and development for children, adolescents, and families in collaboration with schools, community agencies, and government organizations. A 10-hour pre-practicum experience in a K-12 school setting is required. PREREQ: EDG 700, 701.

EDG 705: Group Counseling. 3 hours, 3 credits. Examination of group counseling, consultation, and collaboration theory and practice with children, adolescents, families, and school personnel in urban school and community settings. Major themes include group dynamics, group process, leadership styles, and group stages. A 10-hour pre-practicum experience in a K-12 school setting is required. PREREQ: EDG 700, 701.

EDG 706: Assessment in Counseling. 3 hours, 3 credits. Examination of assessment theory and practice in urban school counseling settings, including culturally competent assessment and diagnosis; types of academic and interpersonal assessment instruments; use of statistics; and application of assessment data to promote academic, career, and interpersonal success. A 10-hour pre-practicum experience in a K-12 school is required. PREREQ: EDG 703 or permission of the program coordinator.

EDG 707: Practicum in Counseling. 3 hours, 3 credits plus fieldwork. Application of counseling theories and techniques to practice in an urban K-12 school counseling field site under supervision. Counseling, consultation, advocacy, assessment, and leadership skills are monitored by faculty via student self-report, journals, videotaped counseling sessions, and group supervision. 40 hours of direct counseling/consultation services and 60 hours of collateral services with students and families are required at the site. This course may be repeated twice for specialized bilingual school counseling or family counseling practicum experience. PREREQ: 18 graduate school counseling credits, including EDG 705 and permission of the Program Coordinator. Bilingual School Counseling and Family Counseling Extension practicum students must have completed 9 extension credits and have permission of the Program Coordinator.

EDG 708: Counseling Research, Program Development, and Evaluation I. 3 hours, 3 credits. Examination of research design, data collection procedures, and the implementation and evaluation of comprehensive developmental K-12 school counseling programs. PREREQ: EDG 706.

EDG 709: Leadership, Advocacy, Consultation, and Change in Schools. 3 hours, 3 credits. Examination of theories of leadership, advocacy, and consultation for change in urban school counseling contexts; assessment of schools and comprehensive developmental K-12 school counseling programs, using educational leadership theory, systems theory, and collaborative approaches to ensure equity and educational success for all students. PREREQ: Matriculation in a graduate education program.

EDG 710: Counseling Research, Program Development, and Evaluation II. 3 hours, 3 credits. Examination of K-12 school counseling research culminating with the development and implementation of an action research project in schools, including design of a research project related to a proposed or existing school counseling or educational program, collection and analysis of data, and a written research article about the project suitable for publication in a professional counseling journal or for presentation at a State or national counseling conference. *NOTE: Formal institutional approval is required before a research project can be implemented.* PREREQ: EDG 708.

EDG/HEA 731: Sexuality Counseling. 3 hours, 3 credits. An overview of sexuality counseling. Stresses the process of interaction between professionals and clients that allows clients to explore and understand their sexuality, feelings, values, responsibilities, needs, and behaviors. Topics include: changing family structure, alternative lifestyles, changing sex roles, an increasing older population, drug and alcohol abuse, and sexually transmitted diseases, including AIDS. PREREQ: Permission of adviser.

EDG 732: Abuse, Violence, and Chemical Dependency Counseling. 3 hours, 3 credits. This course examines current counseling theories, techniques, and research related to abuse, violence, chemical dependency, and crisis in urban schools and families. Prevention, intervention, referrals, and the role of the counselor are emphasized. PREREQ: Matriculation in a graduate education program.

EDG 733: Developmental School Counseling. 3 hours, 3 credits. Examination of theories and techniques for developmental school counseling, consultation, and leadership in elementary, middle, and high school settings to facilitate academic, career, and interpersonal success for all students, with emphasis on the school counselor's collaborative role with parents, guardians, teachers, school administrators, and clinical personnel to create, implement, and evaluate comprehensive developmental school counseling programs. PREREQ: EDG 703.

***EDG 734: Multilingual School Counseling.** 3 hours, 3 credits. Examination of multilingual and multicultural approaches to school counseling and consultation in urban settings with linguistically and culturally diverse children, adolescents, families, and school personnel. PREREQ: EDG 702 and permission from a program coordinator.

EDG 735: Family Counseling. 3 hours, 3 credits. Examination of theories of family counseling and consultation with culturally diverse families in urban school and community contexts with emphasis on the changing nature of families, family assessment, legal issues, and preventive interventions. PREREQ: EDG 701, 703.

EDG 736: Parenting within Diverse Family Structures. 3 hours, 3 credits. Examination of theories and techniques of parenting using a culturally diverse family life cycle model, including how to involve parents, guardians, and other family members in the educational and emotional lives of children and youth through parenting workshops, educational programs, and brief, short-term family counseling interventions in schools and community agencies. PREREQ: EDG 701, 703.

EDG 737: Couples Counseling: Theories and Techniques. 3 hours, 3 credits. Examination of couples counseling and relationship assessment theories and techniques in diverse urban communities, emphasizing enhancement of couple relationships from various cultural perspectives and appropriate prevention and interventions for couples across the lifespan. PREREQ: EDG 701, 703.

EDG 738: Brief Counseling of Children and Adolescents. 3 credits, 3 hours. Examination of brief counseling methods and techniques for children and adolescents. Interviewing techniques and case conceptualization in terms of evidence-based practices will be emphasized. Strategies for professional counselors to document the effectiveness of counseling interventions will also be presented. PREREQ: EDG 702, 705, 706.

EDG 743: Internship in Counseling I. 3 hours, 3 credits plus fieldwork. First of two required supervised internships in urban school counseling and consultation. Counseling interns are required to provide 120 hours of direct counseling/consultation service with clients and 180 hours of indirect collateral service (including staff meetings and on-site supervision) at an approved internship site. Students also participate in weekly group supervision devoted to evaluation of counseling, consultation, advocacy, and leadership using self-report, journals, videotaped counseling sessions, and selected advanced counseling topics. PREREQ: 36 hours of credit in school counseling, including EDG 707 and permission of the Program Coordinator.

EDG 744: Internship in Counseling II. 3 hours, 3 credits plus fieldwork. Second of two required supervised internships in urban school counseling and consultation. Counseling interns are required to provide 120 hours of direct counseling/consultation service with clients and 180 hours of indirect collateral service (including staff meetings and on-site supervision) at an approved internship site. Students also participate in weekly

group supervision devoted to evaluation of advanced counseling, consultation, advocacy, and leadership using self-report, journals, videotaped counseling sessions, and selected advanced counseling topics. PREREQ: EDG 743 and permission of the Program Coordinator.

EDUCATIONAL LEADERSHIP GRADUATE PROGRAMS

Lehman College offers a 33-credit Master of Science in Education Degree program in Educational Leadership leading to New York State Initial Certification as a School Building Leader (S.B.L.) and a 30-credit Advanced Certificate in Educational Leadership leading to New York State Professional Certification as a School District Leader (S.D.L.).

The purpose of the graduate programs in Educational Leadership is to prepare candidates for positions as School Building and School District Leaders, with an emphasis on urban leadership, and to fulfill the New York State licensure requirements for S.B.L. and S.D.L. The programs unite both the development of schools and the development of educational leaders by preparing individuals who can be catalysts for school change and improved student performance.

The programs prepare students for positions of leadership (e.g., principals, department chairs, superintendents, and assistant superintendents) in urban schools with diverse populations. The curriculum is aligned with the New York State content-area requirements for programs preparing educational leaders, leading to certification as an S.B.L. or S.D.L. The pedagogical content of the courses integrates practice with theory. Extensive field-based experiences, in collaboration with school and community agencies, are a central component throughout these programs. Candidates develop their skills and capacities as leaders through both on-campus and school-based experiences with current educational leaders, teachers, counselors, other educational staff, parents, and students. The courses emphasize critical thinking, reflection, and problem solving.

The Educational Leadership graduate programs are committed to preparing candidates who demonstrate the nine essential characteristics of effective leaders, promoted by the New York State Education Department, and are based, in part, on the Division of Education's Lehman Urban Teacher and Counselor Education conceptual model, whose mission is to facilitate the development of competent, caring, and qualified educators.

M.S.ED. PROGRAM IN EDUCATIONAL LEADERSHIP

Overview

The following is a listing, by semester, of the courses that comprise the M.S.Ed. in Educational Leadership leading to an Initial Certificate as an S.B.L. Due to the rigorous content of the program, the M.S.Ed. can be completed in approximately two years, including summers, over 6 semesters.

Note: Registration for all courses requires Departmental approval. Most courses require that students participate in 6 hours of leadership experiences in the field over the course of the semester, in addition to the internship courses.

Semester I (fall): (6 credits)

(These courses are corequisites and prerequisites for all other courses in this program.)

EDL 701: The Principal as a School Building Leader (3 hours, 3 credits)

EDL 702: Ethics in School Leadership (3 hours, 3 credits)

Semester II (spring): (6 credits)

EDL 703: Collaborative and Community-Based Leadership (3 hours, 3 credits)

EDL 704: Instructional and Curriculum Leadership (3 hours, 3 credits)

Semester III (summer): (6 credits)

EDL 705: Technology, Planning, and Managing Resources (3 hours, 3 credits)

EDL 706: Legal and Economic Issues and the Administration of Schools (3 hours, 3 credits)

Semester IV (fall): (6 credits)

EDL 707: Creating Effective and Supportive Learning Environments for All Students (3 hours, 3 credits)

EDL 708: Research, Assessment, and Data-Driven Decision Making (3 hours, 3 credits)

Semester V (spring): (6 credits)

EDL 709: Case Studies in School Building Leadership (3 hours, 3 credits)

EDL 710: The Leadership Experience I (internship/seminar—200 hours, 3 credits)

Semester VI (summer): (3 credits)

EDL 711: The Leadership Experience II (internship/seminar—200 hours, 3 credits)

Admission Requirements

Note: Students admitted every fall semester; applications due by April 1.

1. A baccalaureate degree in a related field (e.g., teaching, school counseling, etc.) from an accredited college or university;
2. A minimum 3.0 (B) Grade Point Average from a completed undergraduate degree program;
3. New York State permanent or professional certification in classroom teaching, school counseling, school psychology, school social work, or the equivalent;
4. A minimum of three years of successful P-12 teaching and/or school counseling, school psychology, or school social work experience;
5. Three letters of recommendation: at least one must be from a current or former school site supervisor who can best evaluate the candidate's potential as a P-12 principal, and at least one must be from a faculty member from prior studies who can best evaluate the candidate's potential for success as a graduate student;
6. A current resume detailing all past professional employment and any community or professional organization leadership positions, memberships, and service;
7. A 1,000-word essay that discusses the following: a) reasons for wanting to pursue a degree and certification as a school building leader; b) candidate's philosophy on excellence in urban educational leadership, including the specific characteristics that contribute to effective leadership; and c) current assessment of the state of educational leadership in urban schools, including what appears to be the greatest challenges and suggestions for overcoming these challenges;

Candidates who satisfy the preliminary admissions requirements will be invited to a group interview.

Continuation Requirements

1. Meet with Program Coordinator to plan courses and receive course approvals prior to or during registration each semester; and if conditions were placed on initial matriculation, all conditions must be met by the completion of the first 12 credits.
2. 24 credits in Educational Leadership courses with a minimum 3.0 Grade Point Average, a completed internship supervision agreement signed by the P-12 Internship Site Supervisor, and permission of the Program Coordinator are

required prior to placement in EDL 710 (The Leadership Experience I) and EDL 711 (The Leadership Experience II); and

3. Demonstrated evidence of ethics, as well as instructional leadership, organizational, administrative, and collaborative skills, through school-based projects.

Graduation Requirements

Note: In order to receive institutional recommendation by Lehman College for New York State certification in S.B.L., students must earn a passing score on the New York State Educational Leadership Assessments in S.B.L.

1. Completion of 33 approved graduate credits of study in educational leadership;
2. A minimum Grade Point Average of 3.0 (B);
3. Successful completion of 400 internship hours; and
4. Submission of the culminating electronic program portfolio in EDL 711 (The Leadership Experience II).

ADVANCED CERTIFICATE IN EDUCATIONAL LEADERSHIP

The following is a listing, by semester, of the courses that comprise the 30-credit Advanced Certificate in Educational Leadership leading to a Professional Certificate as a School District Leader. Due to the rigorous content of the program, the Advanced Certificate can be completed in approximately two years, including one summer, over 5 semesters.

Note: Registration for all courses requires Departmental approval. Most courses require that students participate in 6 hours of leadership experiences in the field over the course of the semester, in addition to the internship courses.

Semester I (fall): (6 credits)

(These courses are corequisites and prerequisites for all other courses in this program.)

EDL 712: Leading an Effective School District (3 hours, 3 credits)

EDL 713: Shared Decision Making and Ethics for the School District Leader (3 hours, 3 credits)

Semester II (spring): (6 credits)

EDL 714: Educational Vision, Strategic Planning, and Systematic Evaluation (3 hours, 3 credits)

EDL 715: Diversity and Educational Leadership (3 hours, 3 credits)

Semester III (summer): (6 credits)

EDL 716: Educational Governance, Policy, and Law (3 hours, 3 credits)

EDL 717: Finance, Operations, and Human Resource Management (3 hours, 3 credits)

Semester IV (fall): (6 credits)

EDL 718: Creating Effective Partnerships: Parents, Community Members, School Boards, and Other Key Stakeholders (3 hours, 3 credits)

EDL 719: Case Studies in School District Leadership (3 hours, 3 credits)

Semester V (spring): (6 credits)

EDL 720: The Leadership Experience—District/Region Level (internship/seminar—400 hours, 6 credits)

Admission Requirements

Note: Students admitted every fall semester; applications due by April 1.

1. A master's degree in a related field (e.g., teaching and school counseling) from an accredited college or university;
2. A minimum 3.0 (B) Grade Point Average from a completed graduate degree program;

3. New York State permanent or professional certification in classroom teaching, school counseling, school psychology, school social work, or the equivalent;
4. A minimum of three years of successful P-12 teaching and/or school counseling, school psychology, or school social work experience;
5. Three letters of recommendation: at least one must be from a current or former school site supervisor who can best evaluate the candidate's potential as a district leader, and at least one must be from a faculty member from prior studies who can best evaluate the candidate's potential for success as a graduate student;
6. A current resume detailing all past professional employment and any community or professional organization leadership positions, memberships, and service;
7. A 1000-word essay that discusses the following: a) reasons for wanting to pursue a degree and certification as a school district leader; b) candidate's philosophy on excellence in urban educational leadership, including the specific characteristics that contribute to effective leadership; c) current assessment of the state of educational leadership in urban schools, including what appears to be the greatest challenges and suggestions for overcoming these challenges; and d) brief analysis of a current educational policy, discussing its pros/cons and its impact on urban districts; and
8. Candidates who satisfy the preliminary admissions requirements will be invited to a group interview.

Continuation Requirements

1. Meet with Program Coordinator to plan courses and receive course approvals prior to or during registration each semester;
2. If conditions were placed on initial matriculation, all conditions must be met by the completion of the first 12 credits;
3. 24 credits in Educational Leadership courses with a minimum 3.0 Grade Point Average, a completed internship supervision agreement signed by the region/district internship site supervisor, and permission of the Program Coordinator are required prior to placement in EDL 720 (The Leadership Experience); and
4. Demonstrated evidence of ethics, as well as instructional leadership, organizational, administrative, and collaborative skills, through school-based and region/district-based projects.

Graduation Requirements

1. Completion of 30 approved graduate credits of study in educational leadership;
2. A minimum Grade Point Average of 3.0 (B);
3. Successful completion of 400 internship hours; and
4. Submission of the culminating electronic program portfolio in EDL 720 (The Leadership Experience).
5. The New York State Education Department has made passing the New York State Education Leadership Assessment in S.D.L. a condition of program completion (for S.D.L. programs only as per State regulations). A student enrolled in the Advanced Certificate leading to S.D.L. certification who does not pass the S.D.L. assessment can enter what the State has termed a "companion program," whereby the student can still receive the Advanced Certificate but will not be eligible for S.D.L. certification at that time. The companion program has the same admission requirements, curriculum, and graduation requirements; however, students who do not pass the S.D.L. assessment will not receive New York State S.D.L. certification.

COURSES IN SCHOOL-BUILDING LEADER

EDL 701: The Principal as a School Building Leader. 3 hours, 3 credits. Examination of concepts, practices, and empirical research related to urban school leadership across the P-12 continuum. Emphasis on basic administrative theories of change, structure, decision making, motivation, communication, and culture as applied to urban school improvement and leadership. Students will participate in 6 hours of leadership experiences in the field over the course of the semester.

EDL 702: Ethics in School Leadership. 3 hours, 3 credits. Examination of the ethical issues that P-12 principals and other school leaders commonly face in urban schools. Emphasis is on leadership strategies that embrace integrity, impartiality, honesty, respect, linguistic and cultural diversity, and a strong work ethic, as well as effecting change through ethical decision making.

EDL 703: Collaborative and Community-Based Leadership. 3 hours, 3 credits. Emphasis on collaborative strategies school-building leaders can use to build consensus with teachers, school counselors and other educational staff, parents, and the community. Focus on the role of the school leader in creating programs that benefit both the school and the community. Students will participate in 6 hours of leadership experiences in the field over the course of the semester. PREREQ: EDL 701 and EDL 702 and/or permission of the Program Coordinator.

EDL 704: Instructional and Curriculum Leadership. 3 hours, 3 credits. Considers structural and professional coordination and supervision of instruction and curriculum. Topics include, but are not limited to developing an instructional vision; clinical supervision; learning theories; curriculum development and theories; instructional and assessment strategies; in-service program design and implementation; and summative and formative evaluations. Students will participate in 6 hours of leadership experiences in the field over the course of the semester. PREREQ: EDL 701 and EDL 702 and/or permission of the Program Coordinator.

EDL 705: Technology, Planning, and Managing Resources. 3 hours, 3 credits. Emphasis on technology planning and application to improve instruction, increase student achievement, and assist with administrative tasks such as planning and budgeting. Topics include, but are not limited to, interactive software for class scheduling, in-service programming, and enhancing instruction; database design and management; funding sources and strategies for acquiring technology and other educational resources, technology applications for students with special needs and English language learners. Students will participate in 6 hours of leadership experiences in the field over the course of the semester. PREREQ: EDL 703 and EDL 704 and/or permission of Program Coordinator.

EDL 706: Legal and Economic Issues and the Administration of Schools. 3 hours, 3 credits. Provides an overview of the legal and economic issues that impact education on the Federal, State, and local levels. Topics include, but are not limited to, the duties and liabilities of school personnel; faculty and student rights; religion and public education; labor negotiations; fiscal planning and budgeting; facility management; and creating a healthy, safe, and secure school environment through effective building management. Students will participate in 6 hours of leadership experiences in the field over the course of the semester. PREREQ: EDL 703 and EDL 704 and/or permission of Program Coordinator.

EDL 707: Creating Effective and Supportive Learning Environments for All Students. 3 hours, 3 credits. Explores the design and implementation of instructional programs targeting students with special needs, English-language learners, and at-risk students. Topics include, but are not limited to, metacognitive strategies; early assessment and intervention; I.E.P. development; applications of behavior management techniques; differentiated instruction; alternative assessment and high-stakes testing; inclusive placements; and co-teaching models. Students will participate in 6 hours of leadership experiences in the field over the course of the semester. PREREQ: EDL 705 and EDL 706 and/or permission of the Program Coordinator.

EDL 708: Research, Assessment, and Data-Driven Decision Making. 3 hours, 3 credits. Identification, use, and interpretation of educational research to impact on school management, instruction, and student performance. Data collection methods for accountability and program evaluation. Action research methods emphasized. Students will participate in 6 hours of leadership experiences in the field over the course of the semester. PREREQ: EDL 705 and EDL 706 and/or permission of Program Coordinator.

EDL 709: Case Studies in School Building Leadership. 3 hours, 3 credits. This capstone course will help students apply the various theories in leadership, decision-making, organizational structure, and motivation to solve problem-based examples related to school building leaders. Through case-study problems, students will also review principles and practices emphasized in the New York State Leadership Assessments. PREREQ: EDL 707 and EDL 708 and/or permission of the Program Coordinator.

EDL 710: The Leadership Experience I. 12 field, 1 lecture, 3 credits. First of two required supervised internships in Educational Leadership. Interns are required to complete 200 hours of school-based leadership experiences at approved school sites. Weekly seminars devoted to reflection on internship experiences through discussion, role playing, and journaling. Includes mandatory two-hour sessions on both child abuse prevention and violence prevention. PREREQ: Satisfactory completion of 21 credits in Educational Leadership and the Program Coordinator.

EDL 711: The Leadership Experience II. 12 field, 1 lecture, 3 credits. Second of two required supervised internships in Educational Leadership. Interns are required to complete 200 hours of school-based leadership experiences at approved school sites. Weekly seminars devoted to reflection on internship experiences through discussion, role playing, and journaling. Submission of the culminating electronic program portfolio at the end of this course. PREREQ: EDL 710 and permission of the Program Coordinator.

EDL 712: Leading an Effective School District. 3 hours, 3 credits. Examination of concepts, practices, and empirical research related to urban district leadership. Emphasis on basic administrative theories of change, supervision, organizational structure, decision making, motivation, communication, and culture as applied to urban district improvement and leadership. Students will participate in 6 hours of leadership experiences in the field over the course of the semester. PREREQ: School leadership experience and/or permission of the Program Coordinator.

EDL 713: Shared Decision Making and Ethics for the School District Leader. 3 hours, 3 credits. The development and application of decisional strategies to address administrative issues such as district operations, resource allocation, curriculum, instruction, staffing, and district-performance. Examination of the ethical dilemmas involved in decision making at the district level and emphasis through role playing and case-study analyses on decision-making strategies that embrace integrity, impartiality, honesty, respect, and linguistic and cultural diversity. PREREQ: School leadership experience and/or permission of Program Coordinator.

EDL 714: Educational Vision, Strategic Planning, and Systematic Evaluation. 3 hours, 3 credits. Examination of the definitions and processes inherent in creating an educational vision, planning to implement the vision, and evaluating progress toward achieving the vision. Emphasis on the fundamentals of educational strategic planning, including mission, beliefs, objectives, policies, S.W.O.T. analyses, action plans, and benchmarking. Students will participate in 6 hours of leadership experiences in the field over the course of the semester. PREREQ: EDL 712 and EDL 713 and/or permission of the Program Coordinator.

EDL 715: Diversity and Educational Leadership. 3 hours, 3 credits. Explores the role of the school district leader in the development, implementation, and supervision of special education, bilingual, and at-risk programs that are culturally and ethnically sensitive. Students will participate in 6 hours of leadership experiences in the field over the course of the semester. PREREQ: EDL 712 and EDL 713 and/or permission of the Program Coordinator.

EDL 716: Educational Governance, Policy, and Law. 3 hours, 3 credits. Analysis of the ways in which political and legal powers and authority impact the structure and function of individual schools and districts. Examines the role of school district leaders in setting policy. Topics include, but are not limited to, high-stakes testing and accountability issues; pressure groups; and local school policies. Students will participate in 6 hours of leadership experiences in the field over the course of the semester. PREREQ: EDL 714 and EDL 715 and/or permission of the Program Coordinator.

EDL 717: Finance, Operations, and Human Resource Management. 3 hours, 3 credits. Examines the role of the school district leader in long-range financial planning, facility development, and human resource management. Topics include, but are not limited to, financial, human, and general resource allocation; budgeting and accounting procedures and legal requirements; the recruitment, training, retention, assignment, evaluation, and mentoring of personnel; purchasing procedures; building and grounds management; and benefits analysis and cost controls. Students will participate in 6 hours of leadership experiences in the field over the course of the semester. PREREQ: EDL 714 and EDL 715 and/or permission of Program Coordinator.

EDL 718: Creating Effective Partnerships: Parents, Community Members, School Boards, and Other Key Stakeholders. 3 hours, 3 credits. Explores the role and responsibilities of the school district leader in relation to the community as a whole, including local institutions of higher education, social and health agencies, and teacher unions, as well as the politics involved in interacting with community partners. Topics include, but are not limited to, community analysis methods; techniques designed to improve community relations; marketing strategies; and public relations models. Students will participate in 6 hours of leadership experiences in the field over the course of the semester. PREREQ: EDL 716 and EDL 717 and/or permission of program coordinator.

EDL 719: Case Studies in School District Leadership. 3 hours, 3 credits. This capstone course applies the principles of leadership, decision making, governance, and administration to address school district management. Principles and practices emphasized the New York State Leadership Assessments will be highlighted through a case-study approach. PREREQ: EDL 716 and EDL 717 and/or permission of the Program Coordinator.

EDL 720: The Leadership Experience. 25 field, 1 lecture, 6 credits. This is a required supervised internship for all students pursuing the Advanced Certificate leading to School District Leader certification. Interns are required to complete 400 hours of district- or region-based leadership experiences at approved internship sites. Weekly seminars devoted to reflection on internship experiences through discussion, role playing, and journaling. Submission of the culminating electronic program portfolio at the end of this course. Includes mandatory two-hour sessions on both child abuse prevention and violence prevention. PREREQ: Satisfactory completion of 21 credits in educational leadership and permission of the Program Coordinator.

M.S.ED. PROGRAM IN LITERACY STUDIES:

**The concentration in Literacy Studies: Adult is not expected to be offered in 2009-2011.*

The 36-credit Program in Literacy Studies leads to a Master of Science in Education degree. Registered in New York State, the program leads to professional certificates for teaching literacy in three different concentrations: Early Childhood: Birth-Grade 2; Childhood: Grades 1-6; or Middle Childhood and Adolescent: Grades 5-12, provided all other requirements have been met. The program is located in Carman Hall, Room B-20.

The program provides an intergenerational literacy bridge between communities, families, and schools. It serves educators' continued critical engagement in the current research, methodology, theoretical advancements, and issues in reading, language, and literacy. Teachers in elementary, secondary, and adult educational settings develop a combined mastery of research, theory, and practical issues in current inquiry, and articulate working visions of the future of literacy education.

The program prepares students for professional engagement as intellectuals and practitioners in a pluralistic, multicultural educational system. Program graduates include kindergarten, elementary, and secondary literacy specialists who may become reading teachers, community educators, curriculum specialists, textbook authors, and school administrators. Some graduates also enter doctoral programs.

The extension courses focus on the nature and needs of culturally and linguistically diverse gifted and talented students and on best practices for teaching students with these characteristics.

Admission Requirements

1. A bachelor's degree or equivalent from an accredited college or university.
2. Demonstrated ability to pursue graduate study successfully, that is, a minimum grade average of B in the undergraduate records as a whole.
3. An initial teaching certificate or qualify for initial certification within three semesters
4. An essay outlining career goals.
5. Two letters of recommendation.
6. An individual interview.
7. An essay of no more than 500 words written onsite

Continuation Requirements

1. Maintain G.P.A. of 3.0.
2. Meet any conditions placed on initial matriculation before the completion of 12 graduate credits. *College and Departmental policies regarding academic probation also apply.*

Graduation Requirements

1. Students must complete a minimum of 36 graduate credits of study in an approved Literacy Studies concentration.
2. Students must earn a minimum G.P.A. of 3.0 in a 36-credit Literacy Studies concentration. Each student must earn a minimum grade of B or better in the overall program in order to be recommended by the College for certification.

Overview of the Programs

Students must complete the courses listed below in one of the following areas of specialization to be eligible for the professional certificate. *Sequence varies for spring entrants.*

Literacy Specialist: Early Childhood Education (Birth-Grade 2) (36 credits)*

- EDR 701 (3), EDR 711 (3)
EDR 721 (3), EDR 751 (3)
EDR 731 (6)
EDR 767 (3), EDR 765 (3)
EDR 768 (3), Elective (3)
EDR 780 (3),** Elective (3)

Literacy Specialist: Childhood Education (Grades 1-6) (36 credits)*

- EDR 702 (3), EDR 712 (3)
EDR 722 (3), EDR 765 (3)
EDR 731 (6)
EDR 767 (3), EDR 752 (3)
EDR 768 (3), Elective (3)
EDR 780 (3),** Elective (3)

Literacy Specialist: Middle Childhood and Adolescent Education (Grade 5-12) (36 credits)*

- EDR 703 (3), EDR 713 (3)
EDR 723 (3), EDR 753 (3)
EDR 733 (6)
EDR 767 (3), EDR 765 (3)
EDR 768 (3), Elective (3)
EDR 780 (3),** Elective (3)

** Sequence may vary.*

*** Topics may vary.*

COURSES IN LITERACY STUDIES

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

EDR (ESC) 529: Language, Literacy, and Educational Technology. 3 hours, 3 credits. Using information technology to support the teaching of literacy to students of diverse language backgrounds and abilities through the content areas. Social, legal, and ethical issues affecting the instructional use of technology. Curriculum development; current standards; inclusion of students with disabilities; and assessment. No prior computing experience is necessary. Includes field experience.

EDR 605: Professional Writing for Educators. 3 hours, 3 credits. Critical and comparative analysis of texts; application to academic writing and editing, including research reports, grant proposals, and field studies. PREREQ: Permission of the coordinator/ instructor.

***EDR 700: Studies in the Teaching of the Language Arts—Advanced Course.** 3 hours, 3 credits. Examination of language arts research (listening, speaking, reading, writing) related to classroom practices.

EDR 701: Language and Literacy Development of Infants, Toddlers, and Young Children. 3 hours, 3 credits. Examination of theories of and research on language and literacy development among infants, toddlers, and young children of varying developmental abilities and from diverse linguistic and cultural backgrounds. PREREQ: Permission of the coordinator.

EDR 702: Language and Literacy Acquisition and Development of Children. 3 hours, 3 credits. Examination of theories of and research on language and literacy development among students of varying developmental abilities and from diverse linguistic and cultural backgrounds. PREREQ: Permission of the coordinator.

EDR 703: Literacy Acquisition and Development of Pre-Adolescents and Adolescents. 3 hours, 3 credits. Examination of theories of and research on language and literacy development among pre-adolescents and adolescents of varying developmental abilities and from diverse linguistic and cultural backgrounds. PREREQ: Permission of the coordinator.

***EDR 705: Second Language Literacy.** 3 hours, 3 credits. An examination of research on literacy development in a second or foreign language and its pedagogical implications. PRE- or COREQ: EDR 701 and/or permission of the coordinator.

EDR 711: Instructional Approaches for Language and Literacy Development in Early Childhood Education. 3 hours, 3 credits. Instructional approaches appropriate for language and literacy development in early childhood education based upon current research. Examination, selection, design, and organization of linguistically and culturally relevant instructional practices, strategies, and materials for literacy development of infants, toddlers, and young children of varying developmental abilities. PREREQ or COREQ: EDR 701 or permission of the coordinator.

EDR 712: Instructional Approaches for Language and Literacy Development in Childhood Education. 3 hours, 3 credits. Instructional approaches appropriate for language and literacy development in childhood education based upon current research. Examination, selection, design, and organization of culturally and linguistically relevant instructional practices, strategies, and materials for literacy development of children with varying developmental abilities during childhood education. PREREQ or COREQ: EDR 702 or permission of the coordinator.

EDR 713: Instructional Approaches for Language and Literacy Development in Middle and Adolescent Education. 3 hours, 3 credits. Instructional approaches appropriate for language and literacy development in middle childhood and adolescent education based upon current research. Examination, selection, design, and organization of linguistically and culturally relevant instructional practices, strategies, and materials for literacy development of pre-adolescents and adolescents with varying developmental abilities. PREREQ or COREQ: EDR 703 or permission of the coordinator.

***EDR 715: Development and Evaluation of Reading Materials.** 3 hours, 3 credits. Selection and/or design and evaluation of reading materials for mono- and bilingual settings.

***EDR 716: Literacy Development in Nontraditional Settings.** 3 hours, 3 credits. Theoretical and empirical foundations for designing and implementing literacy programs in nontraditional settings. Examines and analyzes theories and practices of language, learning, knowledge, and ideology. Assessment and observations under supervision are made of operating literacy programs. PREREQ: EDR 706 and permission of the coordinator.

EDR 721: Assessing and Evaluating Language and Literacy Development in Early Childhood Education. 3 hours, 3 credits. Assessing, evaluating, and facilitating language and literacy development among young children of varying developmental abilities and from diverse linguistic and cultural backgrounds. Supervised use of informal, alternative, portfolio, and/or formal evaluation strategies. Case studies done under supervision. PREREQ: EDR 701 and EDR 711, or permission of the coordinator.

EDR 722: Assessing and Evaluating Language and Literacy Development in Childhood Education. 3 hours, 3 credits. Assessing, evaluating, and facilitating language and literacy development among students of varying developmental abilities and from diverse linguistic and cultural backgrounds. Supervised use of informal, alternative, portfolio, and/or formal evaluation strategies. Case study done under supervision. PREREQ: EDR 702 and EDR 712, or permission of the coordinator.

EDR 723: Assessing and Evaluating Language and Literacy Development in Middle Childhood and Adolescent Education. 3 hours, 3 credits. Assessing, evaluating, and facilitating language and literacy development among students of varying

developmental abilities and from diverse linguistic and cultural backgrounds. Supervised use of informal, alternative, portfolio, and/or formal evaluation strategies. Case study done under supervision. PREREQ: EDR 703 and EDR 713, or permission of the coordinator.

***EDR 726: Curriculum Development for Literacy Programs in Nontraditional Settings.** 3 hours, 3 credits.

EDR 731: Practicum in Fostering Language and Literacy Development in Early Childhood and Childhood Education: 90 hours, 6 credits (summer session only). Assessment and evaluation of literacy development in early childhood and childhood education. Planning and implementing programs for children of varying developmental abilities and from diverse linguistic and cultural backgrounds. Case studies done under supervision. PREREQ: EDR 721 or EDR 722 (with a grade of B or better) and/or permission of the coordinator.

EDR 733: Practicum in Fostering Language and Literacy Development in Middle Childhood and Adolescent Education. 15 hours, 6 credits (summer session only). Assessment and evaluation of literacy development in middle childhood and adolescent education. Planning and implementing programs for students of varying developmental abilities and from diverse linguistic and cultural backgrounds. Case studies under supervision. PREREQ: EDR 723 (grade of B or better) and/or permission of the coordinator.

***EDR 736: Practicum in Literacy Development in Nontraditional Settings.** 3 hours, 3 credits. (May be reelected once.) Development and evaluation of literacy programs in nontraditional settings. Implementation under supervision. PREREQ: EDR 716 and 726 and permission of the coordinator.

EDR 751: Literature-Based Literacy Programs in Early Childhood Education. 3 hours, 3 credits. Examination of research on literature-based literacy programs in early childhood education. Emphasis on programs that facilitate literacy development among children of varying developmental abilities and from diverse linguistic and cultural backgrounds. PREREQ: Permission of the coordinator.

EDR 752: Literature-Based Literacy Programs in Childhood Education. 3 hours, 3 credits. Examination of research on literature-based literacy programs in childhood education. Emphasis on programs that facilitate literacy development among students of varying developmental abilities and from diverse linguistic and cultural backgrounds. PREREQ: Permission of the coordinator.

EDR 753: Literature-Based Literacy Programs in Middle Childhood and Adolescent Education. 3 hours, 3 credits. Examination of research on literature-based literacy programs in middle childhood and adolescent education. Emphasis on programs that facilitate literacy development among students of varying developmental abilities and from diverse linguistic and cultural backgrounds. PREREQ: Permission of the coordinator.

***EDR 756: Literature-based Literacy Programs in Nontraditional Settings.** 3 hours, 3 credits. Examination of research on literature-based literacy programs for adults within family, community, and work settings. Emphasis on programs that facilitate literacy development among adults of varying developmental ability and from diverse linguistic and cultural backgrounds. PREREQ: Permission of the coordinator.

***EDR 762: Investigation in Reading I.** 3 hours, 3 credits. In-depth examination of problems and issues related to reading and learning to read. Development of positions and issues with opportunities for oral and written defense. PREREQ: Advanced standing (18 credits) and permission of the coordinator.

***EDR 763: Investigation in Reading II.** 3 hours, 3 credits. Design and execution of action research related to an issue in reading. PREREQ: EDR 762, advanced standing (18 credits), and permission of the coordinator.

EDR 765: Perspectives on Literacy. 3 hours, 3 credits. Examination of literacy acquisition from a variety of perspectives: for example, anthropological, historical, political, and sociological.

EDR 767-768: Project Seminar: Research on Literacy I and II. 3 hours, 3 credits each. Formulation of a significant project related to literacy development in school, home, or community settings. Definition, design, methods, and implementation of study. PREREQ: 18 credits in program (must complete EDR 701, EDR 702 or EDR 703 ; EDR 711, EDR 712 or EDR 713; EDR 721, EDR 722 or EDR 723; EDR 765; and 6 additional credits) and permission of the coordinator.

EDR 770: Independent Study in Reading. 1-3 hours, 1-3 credits. (May be re-elected for up to 6 credits.) Individual study under supervision. PREREQ: Permission of coordinator.

***EDR 775: Literacy Theories and Programs: Perspectives for Administrators.** 3 hours, 3 credits. Survey course of literacy theory, methods, and programs for school administrators. PREREQ: permission of the coordinator.

EDR 780: Special Topics in Reading. 3 hours, 3 credits. (May be re-elected for up to 6 credits). PREREQ: Permission of the coordinator.

***EDR 785: Honors Seminar: Issues in Literacy.** 3 hours, 3 credits. Intensive study of major contributions in literacy theory and practice. PREREQ: 18 graduate credits in reading or permission of the coordinator.

GRADUATE PROGRAMS IN SPECIAL EDUCATION

Graduate programs in Special Education are designed to develop competent, caring, and qualified special educators to teach diverse learners who present with disabilities in both inclusive and specialized urban settings. The programs' philosophical, conceptual, and instructional underpinnings derive from values and standards established by the Council for Exceptional Children and the New York State Learning Standards, as well as the Lehman Urban Teacher Education framework, which recognizes difference and diversity as foundations for learning and teaching.

Lehman's programs work collaboratively with school personnel, parents, family and community members, and local community organizations to create humanistic, nurturing environments that are responsive to the needs of children in urban settings.

Concentrations are available in Early Childhood Special Education, Childhood Special Education, and Adolescent Special Education to entering students who have already earned an Initial Teaching Certificate from New York State at either the Early Childhood, Childhood, or Adolescent developmental level.

In addition, a Dual Certification Program in Special Education and General Education is available to students who have had no prior training in education and who complete either the Early Childhood Special Education Program or the Childhood Education Program and twelve additional credits in either Early Childhood Education or Childhood Education, to be decided upon in consultation with a Special Education adviser.

Students who have not already earned an Initial Teaching Certificate from New York State at either the Early Childhood, Childhood, or Adolescent development level may participate in the Internship Option which, upon completing 18 master's credits in education, may allow them to apply for an Internship Teaching Certificate that is valid for up to two years.

The Early Childhood Special Education, Childhood Special Education, and Adolescent Special Education Programs are structured non-categorically (not by any one specific disability condition), and require students to enroll in the program that corresponds to the developmental level of their Initial Teaching Certificate or the developmental level at which they intend to teach. Fieldwork, supervised practica teaching, and student teaching in both inclusive and specialized settings are integral to the programs.

Upon completion of one of the three Special Education programs, candidates will qualify for an Initial/Professional Teaching Certificate in Teaching Students with Disabilities at a specific developmental level, a master's degree in Special Education at a specific developmental level, and a Professional Teaching Certificate in the area of the Initial Teaching Certificate earned.

Extensions and Annotations to the Initial/Professional Certificate in Teaching Students with Disabilities

- A Bilingual Extension to the Initial/Professional Certificate in Teaching Students with Disabilities is available by completing a 18-credit Bilingual Extension Module.
- An Annotation for Teaching Students with Severe Disabilities is available to any student who completes one of the three programs of study in Special Education. This annotation requires an additional 9 credits of study involving characteristics of individuals with severe disabilities, collaborative partnership in the provision of services for individuals with severe disabilities, assistive technologies for individuals with severe disabilities, and transition and lifespan services.
- A 12-credit Extension in Teaching Students Who are Gifted and Talented (EDS 725, 726, 727, and 728) is available to any student who already holds an Initial/Professional Certificate as Teacher of Early Childhood (Birth to Grade 2), Childhood (Grades 1-6), Middle and High School Academic Subjects (Grades 7-12), T.E.S.O.L. (Birth-Grade 12), Literacy Specialist: Early Childhood (Birth-Grade 2), Literacy Specialist: Childhood (Grades 1-6), Literacy Specialist: Middle Childhood and Adolescent Education (Grades 5-12), Early Childhood Special Education (Birth to Grade 2), Childhood Special Education (Grades 1-6), and Adolescent Special Education in an Academic Subject (Grades 7-12).

The extension courses focus on the nature and needs of culturally and linguistically diverse gifted and talented students and on best practices for teaching students with these characteristics.

Admission Requirements

Admission requirements for applicants who already possess New York State certification:

1. A bachelor's degree from an accredited college or university.
2. A minimum undergraduate grade average of 3.0.
3. An Initial or Professional New York State Certificate in teaching at the Early Childhood, Childhood, or Adolescent developmental level.
4. A Special Education concentration at the same developmental level as their earned Initial/Professional N.Y.S. Teaching Certificate.
5. An essay outlining career goals.
6. A graded scholarly paper from either an undergraduate course or a graduate course of study previously completed.
7. Two letters of recommendation.
8. Evidence of having taken the New York State Liberal Arts and Sciences Test (L.A.S.T.).
9. Participation in an interview.

Admission requirements to the 48-Credit Dual Certification Program in Early Childhood Special Education and Early Childhood Education or Childhood Special Education and Childhood Education for applicants who do not possess New York State certification:

1. A bachelor's degree from an accredited college or university.
2. A minimum undergraduate grade average of 3.0.
3. An essay outlining career goals.
4. A graded scholarly paper from either an undergraduate course or a graduate course of study previously completed.

- Two letters of recommendation.
- Evidence of having taken the New York State Liberal Arts and Sciences Test (L.A.S.T.).
- Participation in an interview.
- Certification of placement and assurance of ability to complete all the program and course requirements.

Continuation Requirements for Students in the Special Education Sequences of Study

- An earned G.P.A. of 3.0 or higher through the first 18 credits of graduate study.
- If conditions were placed on the initial matriculation involving additional coursework, all conditions must be met on or before the completion of 18 graduate credits. In order to register for coursework beyond 18 graduate credits, the student may be required to provide a 15- to 30-minute videotape of a lesson with a whole class as part of a performance evaluation. Students will receive appropriate feedback and concrete suggestions for improvement, where needed. Each student may be required to integrate feedback and demonstrate improvement on a second videotape to be presented prior to graduation.
- Students must take and submit grades earned on the Special Education Content Specialty Test.

Continuation Requirements for Students in the Dual Certification Special Education and General Education Sequences of Study

- An earned G.P.A. of 3.0 or higher through the first 18 credits of graduate study.
- If conditions were placed on the initial matriculation involving additional coursework, all conditions must be met on or before the completion of 18 graduate credits. In order to register for coursework beyond 18 graduate credits, the student may be required to provide a 15- to 30-minute videotape of a lesson with a whole class as part of a performance evaluation.
- Students must take and submit scores from the Multi-Subject Content Specialty Test and the Special Education Content Specialty Test.

Graduation Requirements

- Complete a minimum of 36 graduate credits of study in an approved Special Education concentration.
- A minimum G.P.A. of 3.0 throughout the 36-credit concentration.
- Provide a second 15- to 30-minute videotape of a lesson with a whole class by the time he or she has completed 30 credits of graduate-level course work, if appropriate. In the event that the student does not demonstrate appropriate teaching skills on the second videotape submission, additional professional development experiences will be prescribed by the Program Coordinator in consultation with the student to address the area(s) of deficit. These additional conditions must be met by the student to graduate and to receive the College's recommendation for certification.

OVERVIEW OF THE PROGRAMS

While each option below is designed to develop expertise in teaching students with disabilities at a specific developmental level, a common core of courses is required across all three Special Education options.

Early Childhood Special Education (36 credits):

EDS 701 (3), EDS 702 (3), EDS 743 (3), EDS 703 (3), EDS 704 (3), EDS 705 (3), EDS 741 (3), EDS 706 (3), EDS 715 (3), EDS 718 (3), EDS 719 (6).

Dual Certification in Early Childhood Special Education and General Education (48 Credits):

EDS 701 (3), EDS 702 (3), 12 credits in Early Childhood Education from the Department of Early Childhood and Childhood Education to be determined upon consultation with the Special Education Advisor, EDS 743 (3), EDS 703 (3), EDS 704 (3), EDS 705 (3), EDS 741 (3), EDS 706 (3), EDS 715 (3), EDS 718 (3), EDS 719 (6).

Childhood Special Education (36 credits):

EDS 701 (3), EDS 707 (3), EDS 743 (3), EDS 708 (3), EDS 709 (3), EDS 710 (3), EDS 741 (3), EDS 711 (3), EDS 715 (3), EDS 718 (3), EDS 719 (6).

Dual Certification in Childhood Special Education and Childhood Education (48 credits):

EDS 701 (3), EDS 707 (3), 12 credits in Childhood Education from the Department of Early Childhood and Childhood Education to be determined upon consultation with the Special Education Advisor, EDS 743 (3), EDS 708 (3), EDS 709 (3), EDS 710 (3), EDS 741 (3), EDS 711 (3), EDS 715 (3), EDS 718 (3), EDS 719 (6).

Adolescent Special Education (36 credits):

EDS 701 (3), EDS 712 (3), EDS 743 (3), EDS 713 (3), EDS 714 (3), EDS 716 (3), EDS 741 (3), EDS 717 (3), EDS 715 (3), EDS 718 (3), EDS 719 (6).

NOTE: A 16-credit Bilingual Extension may be elected as an addition to any of the above programs. A 9-credit annotation for Teaching Individuals with Severe Disabilities may be elected upon completion of any of the above programs. A 12-credit extension for Teaching Individuals who are gifted and talented may be added upon completion of any of the above programs.

To obtain Special Education Certification in New York State, all applicants will be required to pass the New York State Content Specialty Test in Special Education.

COURSES IN SPECIAL EDUCATION

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

EDS 700: Biomedical Aspects of Handicapping Conditions. 3 hours, 3 credits. Consideration of the various medical problems that may be associated with moderate and severe handicapping conditions.

EDS 701: Understanding Individuals with Disabilities. 3 hours, 3 credits. This introductory course studies mild, moderate, and severe disability conditions that affect individuals across the lifespan. Included are: historical foundations, key legislation governing education and habilitation of individuals with disabilities, etiology and comorbidity, assistive technologies, school-based programming, parent advocacy and collaborative work with families, impact of cultural and linguistic diversity on identification and classification, and transition to independent living and provision of services across the lifespan. (15 fieldwork hours required.) PREREQ: Permission of the adviser.

EDS 702: The Young Child with Special Needs. 3 hours, 3 credits. Nature and needs of culturally and linguistically diverse young children (birth to 8 years) with a wide range of developmental delays and disability conditions. Pertinent legislation, intervention with families, developing Individualized Family Service Plans, and issues of advocacy will be studied within the context of the continuum of service delivery (home-based, center-based, and school-based interventions). (15 fieldwork hours required.) PREREQ or COREQ: EDS 701 or permission of the adviser.

EDS 703: Practicum in Behavioral Assessment and Management of Culturally and Linguistically Diverse Young Children with Special Needs. 3 hours, 3 credits. This supervised practicum focuses on the use of formal and informal behavior assessment practices with culturally and linguistically diverse young children with special needs in inclusive classrooms, the development of appropriate I.F.S.P. and I.E.P. goals in relation to behavioral assessment, the application of behavioral principles of classroom management to inclusive classrooms, and the specific steps and data collection procedures needed to implement a behavior change process with young children. (45 hours Supervised Practicum Teaching: Birth-2 years and/or children 3-5 and/or children 6-8 required.) PREREQ: EDS 701 and EDS 702; COREQ: EDS 743; and permission of the adviser.

EDS 704: Curriculum and Instructional Practices for Culturally and Linguistically Diverse Young Children with Special Needs. 3 hours, 3 credits. Curriculum and instructional practices appropriate for young children with special needs, including: curriculum standards, designing learning environments, developing effective strategies for teaching readiness and content area skills, developing social skill programs, collaborative teaching techniques, and using informal checklists in the development of appropriate I.F.S.P./I.E.P. goals and objectives. Emphasis will be placed on the impact of cultural and linguistic diversity on program planning and skill acquisition. Use of technology for instruction and monitoring student progress will be incorporated throughout the course. (15 hours practicum teaching required.) PREREQ: EDS 703; COREQ: EDS 705.

EDS 705: Practicum in Curriculum and Instruction for Culturally and Linguistically Diverse Young Children with Special Needs. 3 hours, 3 credits. Focusing on the selection, adaptation, design, modification, and evaluation of curriculum and instruction for culturally and linguistically diverse young children with special needs. The development of appropriate I.F.S.P. and I.E.P. goals, instructional objectives, and lesson plans in relation to the child's levels of functioning and cultural and linguistic background. Also addressing the selection of instructional materials and technologies; individualization and group service delivery; collaborative teaching; training of parents as reinforcers of acquired skills; adaptive and social skill acquisition; and the evaluation of students and programs. Course requires submission of a videotaped lesson for evaluation. (45 hours Supervised Practicum Teaching: Birth-2 years and/or children 3-5 and/or children 6-8 required.) PREREQ: EDS 703; COREQ: EDS 704.

EDS 706: Practicum in Assessment for Culturally and Linguistically Diverse Young Children with Special Needs. 3 hours, 3 credits. Selection, adaptation, design, and modification of a test battery for culturally and linguistically diverse young children with special needs. The development of appropriate I.F.S.P. and I.E.P. goals, instructional objectives, and lesson plans in relation to the child's levels of functioning will be emphasized. (45 hours Supervised Practicum Teaching: Birth-2 years and/or children 3-5 and/or children 6-8 required.) PREREQ: EDS 705; COREQ: EDS 741.

EDS 707: The Childhood Student with Disabilities. 3 hours, 3 credits. Nature and needs of culturally and linguistically diverse childhood students (6 to 12 years of age) with a wide range of developmental delays and disability conditions. Pertinent legislation, intervention with families, developing Individualized Education Programs and issues of advocacy will be studied within the context of the continuum of service delivery (inclusive, collaborative, and specialized settings). (15 fieldwork hours required.) PREREQ or COREQ: EDS 701 or permission of the adviser.

EDS 708: Practicum in Behavioral Assessment and Management of Culturally and Linguistically Diverse Childhood Students with Disabilities. 3 hours, 3 credits. Focusing on the use of formal and informal behavior assessment practices with culturally and linguistically diverse childhood students with disabilities in inclusive classrooms; the development of appropriate I.E.P. goals in relation to behavioral assessment; the application of behavioral principles of classroom management to inclusive classrooms; and

specific steps and data collection procedures to implement a behavior change process with childhood students with disabilities. (45 hours Supervised Practicum Teaching: Grades 3-4 and Grades 5-6 required.) PREREQ: EDS 707; COREQ: EDS 743.

EDS 709: Curriculum and Instructional Practices for Culturally and Linguistically Diverse Childhood Students with Disabilities in Inclusive Settings. 3 hours, 3 credits. Curriculum and instructional practices for use with childhood students with disabilities, including: curriculum standards; designing appropriate learning programs and environments; developing strategies for teaching content area skills; developing social skills programs; collaborative teaching techniques; and the use of informal checklists in the development of I.E.P. goals and objectives. Emphasis will be placed on the impact of cultural and linguistic diversity on program planning and skill acquisition. Use of technology for instruction and for monitoring student progress will be incorporated throughout the course. (15 practicum teaching hours required.) PREREQ: EDS 708; COREQ: EDS 710.

EDS 710: Practicum in Curriculum and Instructional Practices for Culturally and Linguistically Diverse Childhood Students with Disabilities in Inclusive Settings. 3 hours, 3 credits. Selection, adaptation, design, modification, and evaluation of curriculum and instruction for culturally and linguistically diverse childhood students with disabilities in inclusive settings. The development of I.E.P. goals, instructional objectives, and lesson plans in relation to the child's level of functioning and cultural and linguistic background; selection of appropriate instructional materials and technologies; whole class, small group, and individualized teaching; collaborative teaching; parent training; adaptive and social skills acquisition; and the evaluation of students and programs will be addressed. Course requires submission of a videotaped lesson for evaluation. (45 hours Supervised Practicum Teaching: Grades 3-4 and 4-5 required.) PREREQ: EDS 708; COREQ: EDS 709.

EDS 711: Practicum in Assessment of Culturally and Linguistically Diverse Childhood Students with Disabilities in Inclusive Settings. 3 hours, 3 credits. Selection, adaptation, design, and modification of a test battery for culturally and linguistically diverse childhood students with disabilities. Students will assess children; write evaluation reports; discuss implications of findings; and make appropriate educational recommendations on the basis of test data, observational data, and ecological data. The development of appropriate I.E.P. goals, instructional objectives, and lesson plans in relation to the child's levels of functioning will be emphasized in the course. (45 hours Supervised Practicum Teaching: Grades 3-4 and Grades 5-6 required.) PREREQ: EDS 710; COREQ: EDS 741.

EDS 712: The Adolescent with Disabilities. 3 hours, 3 credits. Nature and needs of culturally and linguistically diverse adolescents with a wide range and degree of disability conditions. Pertinent legislation, intervention with families, developing I.E.P.'s and I.T.P.'s, postsecondary training opportunities, and issues of advocacy will be studied in the context of the continuum of service delivery (inclusive, collaborative, and specialized settings). (15 fieldwork hours required.) PREREQ or COREQ: EDS 701 or permission of the adviser.

EDS 713: Practicum in Behavioral Assessment and Management of Culturally and Linguistically Diverse Adolescents with Disabilities in Inclusive Settings. 3 hours, 3 credits. Use of formal and informal behavior assessment practices with culturally and linguistically diverse adolescents with disabilities in inclusive classrooms; the development of appropriate I.E.P. goals in relation to behavioral assessment; the application of behavioral principles of classroom management to inclusive classrooms; the individualized application of self-management techniques and behavior contracts for adolescents, where appropriate; and the specific steps and data collection procedures needed to implement a behavior change process with adolescents with disabilities. (45 hours Supervised Practicum Teaching: Grades 9-10 and Grades 11-12.) PREREQ: EDS 712; COREQ: EDS 743.

EDS 714: Curriculum and Instructional Practices for Culturally and Linguistically Diverse Adolescents with Disabilities in Inclusive Settings. 3 hours, 3 credits. Curriculum and instructional practices for use with childhood students with disabilities, including: curriculum standards, designing appropriate learning programs and environments, developing effective strategies for teaching content area skills, developing social skills programs, collaborative teaching techniques, and use of informal checklists in the development of appropriate I.E.P. goals and objectives. Emphasis will be placed on the impact of cultural and linguistic diversity on program planning and skill acquisition. Use of technology for instruction and for monitoring student progress will be incorporated throughout the course. (15 hours practicum teaching hours at the developmental level of study required.) PREREQ: EDS 713; COREQ: EDS 716.

EDS 715: Research in Special Education. 3 hours, 3 credits. This course is an introduction to research and will enable students to read, critique, and review professional research. Students will learn about research design, descriptive statistics, quantitative and qualitative research methods, and the use of technology in research. As a final project, the formulation of a research topic and completion of a comprehensive review of literature linked to a teaching project for EDS 718 will be required. PREREQ: EDS 706, 711, 717; COREQ: EDS 718.

EDS 716: Practicum in Curriculum and Instruction for Culturally and Linguistically Diverse Adolescents with Disabilities in Inclusive Settings. 3 hours, 3 credits. Selection, adaptation, design, modification, and evaluation of curriculum and instruction for culturally and linguistically diverse adolescents with disabilities in inclusive settings. The development of appropriate I.E.P. goals, instructional objectives, and lesson plans in relation to the adolescent's level of functioning and cultural and linguistic background; selection of appropriate instructional materials and technologies; whole class, small group, and individualized teaching; collaborative teaching; adaptive and social skill acquisition; and the evaluation of adolescents and programs will be addressed. A videotaped lesson must be submitted for evaluation to satisfy one of the requirements for this course. (45 hours Supervised Practicum Teaching: Grades 9-10 and Grades 11-12.) PREREQ: EDS 713; COREQ: EDS 714.

EDS 717: Practicum in Assessment of Culturally and Linguistically Diverse Adolescents with Disabilities in Inclusive Settings. 3 hours, 3 credits. Selection, adaptation, design, and modification of a test battery for culturally and linguistically diverse adolescents with disabilities. The development of appropriate I.E.P. goals, instructional objectives, and lesson plans in relation to the adolescent's levels of functioning will also be addressed. (45 hours Supervised Practicum Teaching: Grades 9-10 and Grades 11-12.) PREREQ: EDS 716; COREQ: EDS 741.

EDS 718: Culminating Master's Project. 3 hours, 3 credits. A case study of a culturally and linguistically diverse learner with mild to moderate learning and behavior problems in an inclusive classroom setting from the social, educational, and psychological perspectives. Master's candidates, using print and electronic sources, will be required to review pertinent literature, research methodology, and teaching techniques in order to design and implement a specialized instructional program under supervision and to evaluate outcomes. Students will explore disseminating their case-study findings via journals, electronic sources, conferences, etc. A videotaped lesson of this specialized instructional program integrated within an inclusive classroom must be submitted for evaluation to satisfy one of the requirements for this course. (45 hours Supervised Practicum Teaching at appropriate developmental level required.) PREREQ: EDS 706, or 711, or 717; COREQ: EDS 715.

EDS 719: Student Teaching of Diverse Learners with Disabilities in Inclusive and Specialized Settings. 6 hours, 6 credits. Supervised practicum in the teaching of culturally and linguistically diverse young children, childhood students, or adolescents with a broad range of moderate to severe disabilities in specialized

settings. (90 Hours Supervised Practicum Teaching at the developmental level of study required.) PREREQ: EDS 718.

EDS 722: Teaching Students with Severe Disabilities. 3 hours, 3 credits. Teaching diverse learners with severe disabilities in specialized settings across the lifespan (day treatment centers, residential schools/care facilities, and hospitals) and includes the nature and needs of individuals with severe cognitive, behavioral, and/or physical disabilities, etiologies, comorbidity with other disorders, self-care, and adaptive skills curricula, medical and physical management issues, and community-based transition programming. PREREQ: Completion of requirements for M.S.Ed. in Special Education in either Early Childhood, Childhood, or Adolescence or permission of the adviser.

EDS 723: Collaborative Approaches to Teaching Individuals with Severe Disabilities Across the Lifespan. 3 hours, 3 credits. An examination of the collaborative teaching relationships between special educators and general educators, paraprofessionals/teaching assistants, parents, and service providers (speech therapists, occupational therapists, physical therapists, counselors, physicians, and nurse practitioners), and workplace supervisors. Focus on teaching responsibilities, modification of curricula, and teaching for transition to employment and independent living. PREREQ: EDS 722.

EDS 724: Practicum in Teaching Diverse Learners with Severe Disabilities in Specialized Settings. 3 hours, 3 credits. Supervised practicum in the teaching of diverse learners with severe disabilities in specialized settings. Focus on teaching daily life skills to individuals with severe cognitive, behavioral, and physical disabilities in specialized settings, including providing individualized instruction in day treatment centers, residential schools/care facilities, and hospitals. (45 hours Supervised Practicum Teaching at the developmental level of study required.) PREREQ: EDS 722 and EDS 723.

EDS 725: Nature and Needs of Culturally and Linguistically Diverse Gifted and Talented K-12 Students in Inclusive and Gifted Classes. 3 hours, 3 credits. An in-depth study of the nature and needs of gifted and talented culturally and linguistically diverse children and adolescents in inclusive and gifted classrooms. History, models, and theories of gifted education, characteristics of the gifted and talented, identification and prevalence, comorbidity with disabilities, factors that enhance or inhibit gifted development, and national and State standards. 10 hours of observation of inclusive and gifted classes and/or agency programs at the developmental level corresponding to the teaching certificate held. PREREQ: New York State Teaching Certificate or Reciprocal State Teaching Certificate.

EDS 726: Assessment of Culturally and Linguistically Diverse Gifted and Talented K-12 Students in Inclusive and Gifted Classes. 3 hours, 3 credits. Formal and informal assessment of culturally and linguistically diverse gifted and talented students in inclusive and gifted classes. Tools and methods for identifying and assessing gifted and talented students. 15 hours of fieldwork in assessment of gifted learners. PREREQ: EDS 725 and New York State Teaching Certificate or Reciprocal State Teaching Certificate.

EDS 730: Study of Early Special Education. 3 hours, 3 credits. Nature and needs of the handicapped child aged 0 to 5 years with physical, sensorial, mental, and emotional handicapping conditions with a wide range and degree of difficulties. PREREQ: EDS 700 and permission of the coordinator.

***EDS 740: Nature and Needs of the Handicapped.** 3 hours, 3 credits. Survey of the social and educational problems of all types of children with handicapping conditions, including sensory impairment. Content will include children's cognitive, social, and emotional problems, and the medical and psychological bases for appropriate education and care.

EDS 741: Psycho-educational Evaluation of Children with Learning Problems. 3 hours, 3 credits. Theoretical bases of testing and techniques underlying psychoeducational evaluation of children with learning and behavior problems. Issues of standardized, informal, observational, computer-based, curriculum, and portfolio assessment will be addressed. Special attention will be placed on the impact of culture, language, and gender on testing. In a practicum setting, students will administer tests and score, interpret, and share results with parents, teachers, and other professionals. Issues of advocacy and self-advocacy will be addressed. (15 hours practicum teaching at the developmental level of study required.) PREREQ: EDS 705 or EDS 710 or EDS 716; COREQ: EDS 706 or EDS 711 or EDS 717.

EDS 742: Advanced Psycho-educational Assessment. 3 hours, testing time, 3 credits. Analysis of major issues involved in the educational assessment of culturally and linguistically diverse populations, particularly in urban settings. Course content will emphasize curriculum-based assessment, design of nonstandardized assessment instruments, and the review of pertinent research findings. PREREQ: EDS 741 and permission of the program coordinator.

EDS 743: Behavioral Assessment, Management, and Change. 3 hours, 3 credits. The study of applied behavior analysis (A.B.A.) theories and techniques for individualized academic, daily life, and social/behavioral interventions with at-risk, culturally and linguistically diverse, and/or special needs children and adults across the lifespan. Specific applications of applied behavior analysis techniques for behavior management in home, school, and community settings. PREREQ: EDS 701 or permission of the advisor; COREQ (for matriculated students only): EDS 703 or EDS 708 or EDS 713.

***EDS 744: Visual Arts for Children with Learning Problems.** 3 hours, 3 credits. Workshop course using art, media, and material; readings; and discussions related to the artistic development of the child with learning problems. Art activities will be derived from the following developmental areas: organizing (preplanning, sequencing, and ordering); body awareness; form and spatial awareness. All workshop activities incorporate visual, kinesthetic, haptic, and audio components to achieve intersensory growth and internalization of the learning experience. PREREQ: Permission of the coordinator.

***EDS 745: Curriculum, Instruction, and Management of Infants and Toddlers with Special Needs—A Practicum.** 3 hours, field experience, 3 credits. A guided experience of teaching infants and toddlers with handicaps in a variety of settings. PRE- or COREQ: EDS 746 and permission of the coordinator.

***EDS 746: Diagnostic Study and Habilitation of Infants and Toddlers with Special Needs.** 3 hours, field experience, 3 credits. Theoretical bases and techniques underlying diagnostic evaluation of singly- and multiply-impaired infants and of toddlers with multiple impairments from birth to three years of age. Diagnostic-prescriptive psycho-educational principles for fostering positive development. The objective of the course is to enable the student to determine the developmental requirements of infants and toddlers with physical, psychological, neurological, and learning impairments and to discover strategies for the infants' habilitation. PREREQ: EDS 730 and permission of the coordinator.

***EDS 747: Diagnostic Study and Special Education of Older Preschool Children with Special Needs.** 3 hours, field experience, 3 credits. Theoretical bases and techniques underlying diagnostic evaluation of preschoolers with single and multiple impairments from 3 to 6 years of age. Diagnostic-prescriptive psycho-educational principles for fostering positive development. The objective of the course is to enable the student to determine the developmental requirements of older preschool children with physical, psychological, neurological, and learning impairments and to discover strategies for their special education and habilitation. PREREQ: 18 credits in special education and EDS 746, or approval of the coordinator.

***EDS 748: The Adolescent with Developmental Learning Problems.** 3 hours, field experience, 3 credits. The effects of unremediated learning problems on the adolescent's attempts to master curriculum. Compensatory adaptations; secondary emotional problems. Diagnostic-prescriptive program for remediation of cognitive and affective disturbances. PREREQ: EDS 760 and 741; or permission of the coordinator.

***EDS 749: Movement for Children with Learning Problems.** 3 hours, field experience, 3 credits. Integration of cognitive and affective abilities of the child with developmental learning problems through psychomotor/dance training. Designed to provide the student with competency to use psychomotor methods to permit the child access to improved learning of perceptual, linguistic, and academic skills. PREREQ: Permission of the coordinator.

***EDS 750: Study of the Mentally Retarded and the Multiple-Handicapped Individual.** 3 hours, 3 credits. Study of current research, efficacy of past and present practices, knowledge of specialized terminology and theories, related services, and disciplines enabling teachers to become full participants in transdisciplinary terms. Site visits are planned to a variety of placements.

***EDS 751: Curriculum and Methodology for Retarded and Multiple-Handicapped Children.** 3 hours, 3 credits. Synthesizing assessment information to develop an individualized educational plan for individuals who are retarded and/or have multiple handicaps. Knowledge of various curricular missions, strategies and methodologies, techniques, and materials. Understanding use and care of prostheses and other equipment to facilitate learning. Evaluating instructional objectives, methodology, and child-management procedures. PREREQ: EDS 750.

***EDS 752: Development of Functional Literacy Skills in Individuals with Mental Retardation.** 3 hours, 3 credits. Identification, analysis, and remediation of literacy disorders of children who are mildly retarded. Emphasis on communication skills of reading and writing, although those of listening and speaking will be included. For individuals who are moderately retarded, literacy skills contained within activities of daily living will be stressed. PREREQ: Permission of the coordinator.

***EDS 753: Practicum—Teaching Individuals with Retardation.** 3 hours, field experience, 3 credits. A guided experience of teaching individuals with retardation in a variety of settings. PREREQ: Permission of program coordinator.

***EDS 754: Individuals with Handicaps: Vocational Environments.** 3 hours, field experience, 3 credits. Developing awareness in special educators of the importance of meeting the total life career development needs of most individuals who are handicapped. The various vocational environments and agencies that accommodate individuals with handicaps are explored. The relevance of personal and social functioning is emphasized in relation to job success. The need to adopt the principle of normalization in vocational services is stressed, along with understanding vocational assessment techniques.

***EDS 755: The Special Child in the Home, School, and Community: Strategies for Adaptation.** 3 hours, field experience, 3 credits. Emphasizes the socio-ecological approach to educating the child with handicaps. This approach views behavior as a function of the relationship between the child and the environment. The course is designed to provide educators and parents with strategies to enhance the home, school, and community networks.

***EDS 756: Specialized Techniques for Teaching the Person with Emotional Handicaps.** 3 hours, fieldwork, 3 credits. Investigation and field-based application of specialized behavioral techniques for teaching the emotionally handicapped learner. Behavioral techniques, humanistic approaches, and interfacing with other professionals will be explored. PREREQ: EDS 770, 771, and 743.

***EDS 757: Transdisciplinary Approaches and the Person with Handicaps.** 3 hours, fieldwork, 3 credits. Investigation and conceptualization of the roles and responsibilities of the members of the transdisciplinary teams as they relate to service delivery for individuals with handicaps in a variety of settings, including residential, day-treatment, hospital, and others. Site visits to a variety of placements will be required. PREREQ: Permission of the coordinator.

***EDS 758: Practicum—Teaching the Individual with Multiple Handicaps.** 3 hours, field experience, 3 credits. A guided experience of teaching children and adults with handicaps in a variety of settings. PREREQ: Permission of the coordinator.

***EDS 759: Curriculum, Instruction, and Management of Older Preschool Children with Special Needs—A Practicum.** 3 hours, field experience, 3 credits. A guided experience of teaching preschoolers with handicaps in a variety of settings. PRE- or COREQ: EDS 747 and permission of the coordinator.

***EDS 760: Study of the Person with Learning Disabilities.** 3 hours, 3 credits. Study of the theory of specific learning disability. Examination of psychological, neurological, and linguistic theories of language and learning. Emphasis on the behavioral characteristics of individuals with specific disabilities, and general implications for instruction. PREREQ: Permission of the coordinator.

***EDS 761: Curriculum Planning in Learning Disabilities.** 3 hours, 3 credits. Examination of basic concepts in curriculum design and their implications for selection and/or modification of curricula for individuals with specific learning disabilities in classroom and clinical settings. PREREQ: EDS 760 and permission of the coordinator.

***EDS 762: Practicum in Remediation of Specific Disabilities.** 3 hours, 3 credits. (May be reelected to 6 credits.) Supervised practicum in the identification, analysis, and remediation of specific learning disabilities. PREREQ: EDS 760, EDS 741, and permission of the coordinator.

EDS 763: Seminar in Current Issues and Problems in Special Education. 3 hours, 3 credits. The critical analysis and in-depth study of current issues and problems in Special Education. Topics covered will be relevant to the education of the child with special needs and will include issues such as funding, legislation, litigation, labeling, mainstreaming, and teacher attitudes. PREREQ: 9 credits in Special Education or related fields, and permission of the coordinator.

***EDS 764: Practicum in the Assessment of Specific Learning Disabilities.** 3 hours, 3 credits. (May be re-elected to 6 credits.) Supervised practicum in the remediation of specific learning disabilities. PREREQ: EDS 741 and 761, and permission of the coordinator.

***EDS 765: Program Planning for Special Education.** 3 hours, 3 credits. Analysis of factors affecting the design and implementation of special education programs for schools and/or alternative settings—foster homes, group homes, intermediate facilities, and regional centers. Program design and implementation under supervision. PREREQ: Permission of the coordinator.

***EDS 767: Practicum in Remediation of Specific Learning Disabilities.** 3 hours, 3 credits. (May be repeated to a maximum of 6 credits.) Supervised practicum in the remediation of specific disabilities. PREREQ: EDS 741 and 761, and permission of the coordinator.

***EDS 768: Practicum in the Assessment of Specific Learning Disabilities.** 3 hours, 3 credits. (May be repeated to a maximum of 6 credits.) Supervised practicum in the assessment of specific learning disabilities. PREREQ: EDS 742 and permission of the coordinator.

***EDS 770: Study of the Person with Emotional Handicaps.** 3 hours, 3 credits. Study of the characteristics, development, and behaviors of the emotionally handicapped. Emphasis on implications for management and education. PREREQ: Permission of the coordinator.

***EDS 771: Planning Curricula for the Person with Emotional Handicaps.** 3 hours, 3 credits. Techniques for analyzing the strengths and weaknesses of individual students with emotional handicaps. Practice in selecting goals to be sought in working with the student, in determining strategies for teaching, and in designing appropriate materials for use in working toward these goals. PREREQ: EDS 770 and permission of the coordinator.

***EDS 772: Practicum in Teaching the Person with Emotional Handicaps.** 6 hours, 6 credits. Supervised practicum in teaching the emotionally handicapped. PREREQ: EDS 771 and permission of the coordinator.

***EDS 790: Independent Study in Special Education.** 1-3 hours, 1-3 credits. (May be re-elected for up to 6 credits.) Individual study, under supervision. PREREQ: 18 credits completed in Special Education and permission of coordinator.

COURSES IN BILINGUAL SPECIAL EDUCATION

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

***EBS 701: Issues in Bilingualism.** 3 hours, 3 credits. The nature of bilingualism as a societal and individual phenomenon. In-depth study of linguistic, applied linguistic, psycholinguistic, sociolinguistic, neurolinguistic, and educational aspects of bilingualism. PREREQ: Permission of the coordinator.

***EBS 741: Psycho-educational Evaluation of Bilingual Children with Mild to Moderate Learning and Behavior Problems.** 3 hours, 3 credits. Theoretical bases and techniques underlying the psycho-educational evaluation of bilingual children with learning and behavior problems. The specific concerns related to the assessment of bilingual individuals will be highlighted, including attitudes of school personnel, test bias, misuse of tests, culture-specific tests and local norms, culture-fair tests, procedures and instruments for unbiased testing, and nondiscriminatory assessment models and practices for teachers and evaluators. PREREQ: EBS 701, 760, and permission of the coordinator.

***EBS 760: The Bilingual Child with Mild to Moderate Learning and Behavior Problems.** 3 hours, 3 credits. Study of the theories associated with learning disabilities and second-language learning as they relate to academic and behavioral problems presented by bilingual students in Special Education programs, and implications of those theories for instruction. PREREQ: EBS 701, EDS 740, or permission of the coordinator.

***EBS 761: Curriculum Planning for Bilingual Students with Mild to Moderate Learning and Behavior Problems.** 3 hours, 3 credits. Curriculum development, use of specialized teaching techniques, and adaptation of instructional materials for bilingual students with mild to moderate learning and behavior problems. PREREQ: EBS 701, EDS 740, EBS 760, EBS 741, or permission of the coordinator.

***EBS 767: Practicum in the Remediation of Bilingual Students with Mild to Moderate Learning and Behavior Problems.** 3 hours, 3 credits. Supervised practicum in the remediation of bilingual students with mild to moderate learning and behavior problems. PREREQ: EBS 741, 760, 761, and permission of the coordinator.

***EBS 768: Practicum in the Assessment of Bilingual Students with Mild to Moderate Learning and Behavior Problems.** 3 hours, 3 credits. Supervised practicum in the assessment of bilingual students with mild to moderate learning and behavior problems. PREREQ: EBS 741, EDS 742, EBS 761, or permission of the coordinator.

COURSES IN FAMILY AND CONSUMER STUDIES

*Courses preceded by an asterisk are not expected to be offered in 2009-2011.

FCS 501: Current Problems in Family and Consumer Studies. 1 hour, 1 credit. (Open to all graduate students. May be reelected by F.C.S. matriculants up to a maximum of 8 credits with a change in topic.) Topics will be announced before the start of each semester.

FCS 503: Current Problems in Family and Consumer Studies. 3 hours, 3 credits. (Open to all graduate students. May be reelected by F.C.S. matriculants up to a maximum of 9 credits with a change in topic.) Topics will be announced before the start of each semester.

***FCS 571: The Family and the Law.** 3 hours, 3 credits. Examination of laws that directly affect the family: laws pertaining to marriage, adoption, estate planning, foster care, and family relations. Emphasis on the work of Federal, State, and local agencies; and legal requirements, proscriptions, etc., in the areas of consumer health protection, housing, and financial management.

FCS 601: Seminar in Family and Consumer Studies. 1 hour, 1 credit. (May be reelected for credit as often as the topic changes.) Recent developments in specific topics. PREREQ: Chair's permission.

***FCS 611: Clothing Management.** 3 hours, 3 credits. Recent developments in the production, purchase, and utilization of textiles and clothing as they relate to the management of personal and family problems. Evaluation of methods and materials for teaching clothing management. PREREQ: FCS 202 and 302 (or equivalents).

***FCS 651: Housing for Family Living I.** 3 hours, 3 credits. The effect of housing and home environment on the quality of family living. Criteria for the selection of rented, owned, and public housing to fit individual family needs. Trends in housing and community planning. Individual and family responsibilities for improving housing. PREREQ: FCS 180 and 219 (or equivalents).

***FCS 652: Housing for Family Living II.** 3 hours, 3 credits. Analysis of social and physical design features in old and new housing, public and private, with concentration on the effect of housing and home environment on family living. Interrelationship of design and problems of livability with principles of space planning and the effect of design on housing and maintenance costs. PREREQ: FCS 651.

***FCS 661: Developing Family and Consumer Studies Program.** 3 hours plus research project, 3 credits. Principles, procedures, and problems in developing school and community education for home and family living, with emphasis on curriculum building and improvement of instruction in family and consumer studies. PREREQ: ESC 431. PREREQ: Permission of the coordinator.

FCS (ESS) 671: Family Development. 3 hours plus field study, 3 credits. Study of the family cycle, with focus on developmental tasks and changing roles of family members. Proposals for strengthening families. Review of methods and materials for secondary-school teaching of family living.

***FCS 672: Economic Problems of Family.** 3 hours plus field study, 3 credits. Study of the economic status of American families with respect to incomes, employment, housing, and social security. Factors affecting cost of living. The contribution of resource management to the economic welfare of families. Consideration of methods and materials for the teaching of family economics and home management. PREREQ: FCS 316 and 307 (or equivalents).

***FCS 673: Home Economics—Aspects of Consumer Education.** 3 hours, 3 credits. Selection and use of goods and services related to improvement of family living. Individual studies of consumption practices and selected consumer problems. Responsibilities of home economists as consumer advisers.

FCS 674 (HEA 625): Seminar in Human Sexuality. 3 hours, 3 credits. Analysis of current trends, problems, and issues. PRE- or COREQ: FCS 671 and graduate coordinator's permission.

Areas of Specialization Within Family and Consumer Studies

*FCS 651: Housing for Family Living I

*FCS 652: Housing for Family Living II

*FCS 672: Economic Problems of Family Life and Child Development

*FCS 571: The Family and the Law

FCS (ESS) 671: Family Development

*FCS 673: Home Economics—Aspects of Consumer Education

FCS 674 (HEA 625): Seminar in Human Sexuality

*FCS 611: Clothing Management

Special Topics and Program Development

FCS 501: Current Problems in Family and Consumer Studies

FCS 503: Current Problems in Family and Consumer Studies

FCS 601: Seminar in Family and Consumer Studies

*FCS 661: Developing Family and Consumer Studies Program

COURSES IN SPECIAL SUBJECTS

*Courses preceded by an asterisk are not expected to be offered in 2009-2011.

ESS 500: Reading and Writing Connections. 3 hours, 3 credits. An introduction to reading and writing development of culturally and linguistically diverse adolescents. Exploration of the ways in which reading and writing interact. Study of online approaches to facilitate strategic reading of a variety of texts.

ESS 501: Writing and Reading in the Content Areas. 3 hours, 3 credits. Development and critique of curriculum units to advance familiarity and comfort with a variety of texts and written forms that build academic skills in secondary school social studies, science, mathematics, and literature classrooms. Emphasis is on written, oral, and visual strategies to promote comprehension, reflection, and support for the academic development of culturally and linguistically diverse adolescents. PREREQ: None.

ESS (FCS) 671: Family Development. 3 hours plus field study, 3 credits. (See description under FCS (ESS) 671.)

ESS 705: Project Seminar I. 3 hours, 3 credits. Formulation by each student of a significant project related to a special field in education: definition, design, and method for carrying out the project; recapitulation of relevant material; and completion of an outline. Students will work individually, or in small groups, with an instructor. PREREQ: Permission of the program coordinator.

ESS 706: Project Seminar II. 3 hours, 3 credits. Completion of the project undertaken in ESS 705, including a written report on the research or curriculum development carried out, the results of the work, the bases for evaluating the results, and the author's recommendations to others interested in the subject. PREREQ: ESS 705.

***ESS 719: The Dynamics of Working with Groups.** 3 hours, 3 credits. An investigation of theories and research in the area of classroom group dynamics. Study of group development and classroom behavior. Supervised experience in conducting classroom group discussions, guided observation of large and small groups in action, and directed reading in the literature of classroom group behavior. PREREQ: Graduate adviser's permission. Field experience or working with a group may be required.

***ESS 766-767: Comparative Analysis of English and Spanish I and II.** Each 3 hours, 3 credits. I. A descriptive study of American English and Spanish based on current usage. A systematic outline of the sound system, the language patterns, and the vocabulary of both languages. II. Comparison and contrast of the linguistic features of both languages.

*ESS 771: **Mental Hygiene.** 3 hours, 3 credits. Current problems in mental hygiene of the child. Mental hygiene factors in the nursery school and kindergarten, preschool, middle school, later childhood, and adolescent periods.

*ESS 782: **The Slow Learner.** 3 hours, 3 credits. The organization of appropriate programs and curricula and the techniques of instruction for the slow learner in elementary and secondary schools. PREREQ: Full-time teaching experience.

*ESS 783: **Education of the Gifted.** 3 hours, 3 credits. Analysis of the nature and development of gifted children and of educational provisions indicated for them in modern theory and practice. Workshop, research, and case-study procedures stressed. PREREQ: Teaching experience.

*ESS 785: **Microcomputers in Specialized Educational Services.** 3 hours, 3 credits. This course provides a comprehensive overview of computer applications in the areas of counseling and guidance, family and consumer studies, reading, and special education. Use of computers to deliver Specialized Educational services to students across a broad range of ages and instructional needs will be emphasized. PREREQ: Permission of the coordinator.

ESS 789: **Workshops in Curriculum Design.** 1-3 hours, 1-3 credits. (May be relected for credit, with graduate adviser's permission, when the topic changes.) Theoretical and practical approaches to design of curricula. NOTE: Curriculum areas will be announced each semester.

ESS 790: **Workshops in Curriculum Materials Development.** 1-3 hours, 1-3 credits. (May be relected for credit, with Graduate Adviser's permission, when the topic changes.) Selection and development of instructional materials. NOTE: Curriculum areas are announced each semester.

*ESS 793: **The Mass Media in Education.** 3 hours, 3 credits. Techniques for planning, selecting, using, and evaluating the mass media in light of research findings, curriculum objectives, and the needs of students.

*ESS 794: **Technological Resources for Teaching and Learning.** 3 hours, 3 credits. Techniques for planning, selecting, using, and evaluating technological systems and aids for learning and teaching. These will be examined in light of research findings, curriculum objectives, and the needs of students. Programmed materials and associated equipment: projectors, recordings, closed-circuit television, video and kinescope recording, automated record keeping, and measurement devices.

*ESS 795: **Audiovisual Instruction for the Classroom Teacher.** 3 hours, 3 credits. The contribution of audiovisual instructional media (including slides, filmstrips, films, records, computers, and radio and television) to learning. Research equipment, materials, and methods of use for effective teaching and maximal learning. The selection, preparation, creation, and use of audiovisual materials to enrich the learning situation.

COURSES IN EDUCATIONAL MEDIA

*Courses preceded by an asterisk are not expected to be offered in 2009-2011.

EDI 703: **Multimedia Production for Educational Environments.** 3 hours, 3 credits. Plan, design, implement, and assess multimedia tutorials and projects to support problem-based learning and research across the curriculum. PREREQ: EDE 777 and permission of the Program Coordinator.

EDI 704: **Technology, Problem Solving, and Critical Thinking in Education.** 3 hours, 3 credits. Review and application of educational theories and research addressing the new technologies supportive of problem solving, critical, and higher-order thinking. PREREQ: EDE 777 and permission of the Program Coordinator.

EDI 705: **Distance Learning and Electronic Communications Applied to Educational Environments.** 3 hours, 3 credits. Design and analysis of reformed curriculum incorporating the Internet, videoconferencing, electronic communication, and interactive distance-learning classrooms supportive of critical and higher-order thinking. PREREQ: EDE 777 and permission of the Program Coordinator.

EDI 706: **LANS, Networks, and Infrastructure Design and Analysis in Educational Environments.** 3 hours, 3 credits. Investigation of design characteristics of local area networks (L.A.N.S.), intranets, and the global Internet (W.A.N.S.). Issues to be addressed include infrastructure design and management, security maintenance, ethical and legal questions, curriculum development, professional development of users, and the obtaining and allocation of resources for continued support of existing and planned systems. PREREQ: EDI 705 and permission of the Program Coordinator.

*EDI 719: **Instructional Design.** 3 hours, 3 credits. Introduction to the principles and procedures for assessing learners and learner groups, articulating goals and objectives, planning and implementing instructional media, and evaluating results of this instruction.

*EDI 720: **The Mass Media in Education.** 3 hours, 3 credits. The nature of the media in society and its impact on education, viewed in light of communication theory, research findings, and curriculum objectives.

*EDI 721: **Educational Media Production I.** 3 hours, 3 credits. Production and application of still images using a variety of equipment (such as cameras, slide projectors, overhead and opaque projectors) and production and application of slide tape series; use of terms and concepts in producing and examining images. COREQ: EDI 719 or the coordinator's permission.

*EDI 722: **Educational Media Production II.** 3 hours, 3 credits. Production and application of educational materials using moving images and sound (super 8mm film/videotape); use of basic visual terms and concepts in producing and examining these productions. PREREQ: EDI 719 and 721. COREQ: EDI 723 or permission.

*EDI 723: **Instructional Resources for Teaching and Learning.** 3 hours, 3 credits. Locating, evaluating, selecting, and using resources appropriate to the solution of selected educational problems. PREREQ: Coordinator's permission.

*EDI 724: **Practicum in the Application of Media to Educational Problems.** 3 hours, 3 credits. Designing and evaluating instructional materials in field settings (schools, hospitals, prisons, etc.).

*EDI 790: **Videotape and Closed-Circuit Television Productions.** 3 hours, 3 credits. The uses of videotape and closed-circuit television in the curriculum, planning, presenting, and analyzing of TV videotape productions for educational programming.

*EDI 791: **Documentary Film.** 3 hours, 3 credits. Survey of nonfiction film. Study of 16-mm films analyzed in terms of intention, style, quality, and applicability to classroom situations. Students will review current film and television productions. Classroom film documentation of teaching techniques.

*EDI 792: **Simulation and Games.** 3 hours, 3 credits. An introduction to the theory, use, evaluation, and creation of simulation and game situations in school.

*EDI 793: **Intermedia Production Techniques.** 3 hours, 3 credits. Principles of film, animation, editing, macro photography, monaural and stereo recording, and multiscreen projection, and the integration of these media in classroom presentations.

Early Childhood and Childhood Education

Chair: Abigail S. McNamee (Carman Hall, Room B-32A)
Coordinator, Early Childhood Education: Cecilia Espinosa (Carman Hall, Room B-15)

Coordinators, Childhood Education: Jeanne Peloso and Scott Wolfson (Carman Hall, Room B-51, B-52)

Department Faculty and Staff:

Professors: Abigail McNamee, Anne L. Rothstein, Helene Silverman; Associate Professors: Nancy Dubetz, Nancy Maldonado, M. Victoria Rodriguez, Alexandria Lawrence Ross, Marietta Saravia-Shore; Assistant Professors: Cecilia Espinosa, Christy Folsom, Carol Gross, Janet Kremenitzer, Jeanne Peloso, Frances Rofrano, Andrea Zakin; Lecturer: Rogelio Fernandez; Program Coordinators: Frances Rofrano and M. Saravia-Shore (Carman Hall, B-47 and B-45)

The Department offers two programs in Early Childhood Education and two programs in Childhood Education. A 36-42-credit program leads to an M.S.Ed. degree in Early Childhood Education (Birth-Grade 2) and a 42-48-credit program leads to an M.S.Ed. degree in Early Childhood Education: Integration of Bilingual Extension (Birth-Grade 2). Both lead to initial and professional certification in New York State and are designed for candidates who have received no previous certification in early childhood but may have certification in a related area, in keeping with the State's emphasis on dual certification.

The Early Childhood programs serve students who (a) have qualified for initial certification in a related area of teacher education as undergraduates and are interested in dual certification with early childhood education at the professional level (advanced degree), or (b) have 12 or fewer undergraduate credits in teacher education and are interested in initial and professional certification in early childhood education.

A 36-42-credit program leads to an M.S.Ed. Degree in Childhood Education (Grades 1-6). A 39-48-credit program leads to an M.S.Ed. in Childhood Education with Bilingual Extension (Grades 1-6). Both prepare teachers to work in integrated, inclusive, bilingual/multicultural settings. They offer initial and professional certification in New York State upon (a) completion of required coursework, (b) submission of passing scores on the certification examinations, and (c) successful completion of a supervised teaching internship in grades 1-6.

The work of the Department is guided by a conceptual framework referred to as L.U.T.E. (Lehman Urban Teacher Education), which expresses the Department's commitment to developing competent, caring, and qualified educators for the nation's urban schools. Lehman gives teachers a focus on philosophy, trends, curriculum, methods, materials, and research in the field. The bilingual extension option adds the possibility of initial certification with an emphasis on the bilingual/bicultural child.

Courses of study in both programs provide an educational model based on child development and child study principles, New York State Education Department standards and core curriculum, and National Council for the Accreditation of Teacher Education (N.C.A.T.E.) standards as described by the National Association for the Education of Young Children (N.A.E.Y.C.).

PROGRAMS IN EARLY CHILDHOOD EDUCATION

Entrance Requirements: Early Childhood Education

- A bachelor's degree or equivalent from an accredited college or university with a Grade Point Average of 3.0 for all undergraduate and graduate work completed prior to acceptance.
- Two letters of recommendation.
- Submit scores on New York State's Liberal Arts and Sciences Test (L.A.S.T.) for advisement purposes if initial certification is not successfully completed.

- An interview might be scheduled upon faculty request. (Requirements and procedures are available in the Department office, Carman Hall, Room B-32.)

Degree Requirements

To qualify for the M.S.Ed. degree in Early Childhood Education (Birth-Grade 2), students must fulfill the following requirements: (1) Submit scores on the A.T.S.-W. and C.S.T. (2) Complete 42 credits of prescribed coursework. (3) Submit professional portfolio. (4) Satisfactory research project submitted for publication. (5) Apply for initial or professional certification.

To qualify for a M.S. Ed. in Early Childhood Education/Integration of Bilingual Extension (Birth – Grade 2), students must fulfill the following requirements: (1) Submit scores on the A.T.S.-W. and C.S.T. (2) 48 credits of prescribed coursework. (3) Submit professional portfolio. (4) Submit satisfactory research project submitted for publication. (5) Apply for initial or professional certification by completing the requirements for a Bilingual Extension: EDC 738, EDC 739, EDC 727, and SPE 703. Pass the Bilingual Education Assessment (B.E.A.).

Gifted and Talented Certificate Extension

A 12-credit Extension in Teaching Students who are Gifted and Talented (EDS 725, EDS 726, EDS 727, and EDS 728) is available to any student who already holds an Initial/Professional Certificate as a Teacher of Early Childhood (Birth to Grade 2), Childhood (Grades 1-6), Middle and High School Academic Subjects (Grades 7-12), T.E.S.O.L. (Birth – Grade 12), Literacy Specialist: Early Childhood (Birth – Grade 2), Literacy Specialist: Childhood (Grades 1-6), Literacy Specialist: Middle Childhood and Adolescent Education (Grades 5-12), Early Childhood Special Education (Birth to Grade 2), Childhood Special Education (Grades 1-6), and Adolescent Special Education in an Academic Subject (Grades 7-12). The extension courses focus on the nature and needs of culturally and linguistically diverse gifted and talented students and on best practices for teaching students with these characteristics.

OVERVIEW OF THE PROGRAMS

Students in both Early Childhood Education programs must complete courses in three competency areas, including student teaching. To progress from one competency area to the next, candidates must meet continuation requirements as listed below.

Early Childhood Education Birth-Grade 2 (36-42 Credits)

36 credits for students with initial or provisional certification in Pre-K – Grade 6 or Childhood Education.

42 credits for students without prior teacher certification.

- COMPETENCY AREA I: Foundations in Early Childhood Development and Education (12 credits): EDC 721 (3), EDC 722 (3), EDC 734 (3) or elective, EDC 735 (3).

Fulfill requirements for continuation: (1) Complete first 6 credits with a 3.0 G.P.A. (2) Submit academic portfolio for each course of the first 6-12 credits.

- COMPETENCY AREA II: *Professional Coursework in Early Childhood Development and Education (18 credits):* EDC 713 (3), EDC 714 (3), EDC 715 (3), EDC 716 (3), EDC 717 (3), EDC 718 (3).

Fulfill requirements for entry into student teaching: (1) Successful application to the Student Teaching Coordinator. (2) Complete at least 12 credits in Competency Area II.

Student Teaching and Seminar (6 credits): EDC 783 (2) and EDC 790 (4).

Student Teaching Internship and Seminar (6 credits): EDC 745 (1), 746 (1), 748 (2), 749 (2) OR EDC 747 (2), 748 (2), 749 (2) OR EDC 758 (3), 759 (3).

Fulfill requirements for continuation: (1) Successful completion of student teaching or internship. (2) Submit an academic portfolio for each course of the first 36 credits, with evidence of achieved outcomes. (3) Apply for Initial or Professional Certification.

- COMPETENCY AREA III: *Professional Practice in Early Childhood Education (6 credits):* edc 756 (3), edc 757 (3).

Early Childhood Education: Integration of Bilingual Extension, Birth-Grade 2 (42-48 Credits)

The Bilingual Extension of the Initial or Professional Certificate enables one to teach bilingual students. The requirements for the Initial or Professional Certificates must be fulfilled before a Bilingual Extension can be issued. In addition, the Bilingual Education Assessment (B.E.A.) exam is required.

- COMPETENCY AREA I: *Foundations in Early Childhood Development and Education (12 credits):* EDC 721 (3), EDC 722 (3), EDC 734 (3) or elective, EDC 735 (3).

Fulfill requirements for continuation: (1) Complete first 6 credits with a 3.0 G.P.A. (2) Submit academic portfolio for each course of the first 6-12 credits.

- COMPETENCY AREA II: *Professional Coursework in Early Childhood Development and Education (24 credits):* EDC 738 (3), EDC 739 (3), EDC 715 (3), EDC 716 (3), EDC 717 (3), EDC 718 (3), SPE 703 (3), EDC 727 (3).

Fulfill requirements for entry into student teaching: (1) Successful application to the Student Teaching Coordinator. (2) Complete at least 15 credits in Competency Area II.

Student Teaching and Seminar: EDC 783 (2) and EDC 781 (4) (supervised student teaching Bilingual Extension) or EDC 790 (4).

Student Teaching Internship and Seminar: EDC 745 (1), 746 (1), 748 (2), 749 (2) OR EDC 747 (2), 748 (2), 749 (2) OR EDC 758 (3), 759 (3).

Fulfill requirements for continuation: (1) Successfully complete student teaching. (2) Submit an academic portfolio for each course of the first 42 credits, with evidence of achieved outcomes. (3) Apply for Initial or Professional Certification.

- COMPETENCY AREA III: *Professional Practice in Early Childhood Education (6 credits):* EDC 756 (3), EDC 757 (3).

PROGRAMS IN CHILDHOOD EDUCATION

Entrance Requirements: Childhood Education

- A bachelor's degree or equivalent from an accredited college or university with a G.P.A. of 3.0 for all undergraduate and graduate work completed prior to acceptance.
- Two letters of recommendation.
- Submit scores on New York State's Liberal Arts and Sciences Test (L.A.S.T.) and Content Specialty Test (C.S.T.) for advisement purposes if initial certification is not successfully completed.
- An interview might be scheduled by faculty request. (Requirements and procedures are available in the Department office, Carman Hall, Room B-32.)

Degree Requirements

To qualify for the M.S. degree in Childhood Education (Grades 1-6), students must fulfill the following requirements: (1) Submit scores on A.T.S.-W. and C.S.T. (2) Complete 36-42 credits of prescribed coursework. (3) Submit professional portfolio. (4) Submit satisfactory research project for publication. (5) Submit application for Initial or Professional Certification.

To qualify for the M.S. in Childhood Education-Integration of Bilingual Extension (Grades 1-6), students must fulfill the following requirements: (1) Submit scores on the A.T.S.-W. and C.S.T. (2) Complete 39-48 credits of prescribed coursework. (3) Submit professional portfolio. (4) Submit satisfactory research project for publication. (5) Apply for initial or professional certification by completing requirements for Bilingual Extension: EDE 738, EDE 739, EDE 727, and SPE 703. (6) Pass the Bilingual Extension Assessment (B.E.A.).

Gifted and Talented Certificate Extension

A 12-credit Extension in Teaching Students who are Gifted and Talented (EDS 725, EDS 726, EDS 727, and EDS 728) is available to any student who already holds an Initial/Professional Certificate as a Teacher of Early Childhood (Birth to Grade 2), Childhood (Grades 1-6), Middle and High School Academic Subjects (Grades 7-12), T.E.S.O.L. (Birth - Grade 12), Literacy Specialist: Early Childhood (Birth - Grade 2), Literacy Specialist: Childhood (Grades 1-6), Literacy Specialist: Middle Childhood and Adolescent Education (Grades 5-12), Early Childhood Special Education (Birth to Grade 2), Childhood Special Education (Grades 1-6), and Adolescent Special Education in an Academic Subject (Grades 7-12). The extension courses focus on the nature and needs of culturally and linguistically diverse gifted and talented students and on best practices for teaching students with these characteristics.

OVERVIEW OF THE PROGRAMS

Students in both Childhood Education programs must complete courses in three competency areas, including a supervised teaching experience. To progress from one competency area to the next, candidates must meet continuation requirements as listed below.

Childhood Education Grades 1-6 (36 - 42 credits)

36 credits for students with initial or provisional certification in Pre-K - Grade 6 or Childhood Education.

42 credits for students without prior teacher certification.

- COMPETENCY AREA I: *Foundations in Childhood Development and Education (9 credits):* EDE 721 (3), EDE 722 (3), EDE 735 (3).

Submit academic portfolio for each course of the first 9 credits.

- COMPETENCY AREA II: *Professional Coursework in Childhood Development and Education (21 credits):* EDE 621 (3), EDE 713 (3), EDE 714 (3), EDE 715 (3), EDE 716 (3), EDE 717 (3), EDE 718 (3).

(1) Successful application to the Student Teaching Coordinator. (2) Complete at least 12 credits in Competency Area II.

Student Teaching and Seminar (6 credits): EDE 795 (4) and EDE 783 (2).

OR: *Student Internship and Seminar (3 credits):* EDE 783 (2), EDE 784 (1).

This requirement does not apply to students with Initial or Provisional Certification.

(1) Successfully complete student teaching or internship. (2) Submit an academic portfolio for each course of the first 36 credits with evidence of achieved outcomes. (3) Apply for Initial or Professional Certification.

- COMPETENCY AREA III: *Professional Practice in Childhood Education (6 credits):* EDE 756 (3), EDE 757 (3).

Childhood Education Integration of Bilingual Extension: Grades 1-6 (39-48 Credits)

The Bilingual Extension of the Initial or Professional Certificate enables one to teach bilingual students. The requirements for the Initial or Professional Certificates must be fulfilled before a Bilingual Extension can be issued. In addition, the Language Proficiency Assessment (L.P.A.) and the Bilingual Education Assessment (B.E.A.) exams are required.

42 credits for students with Initial or Provisional Certification in Pre-K – Grade 6 or Childhood Education.

48 credits for students without prior teacher certification.

- **COMPETENCY AREA I: Foundations in Childhood Development and Education (9 credits):** EDE 721 (3), EDE 722 (3), EDE 735 (3).

Submit academic portfolio for each course of the first 9 credits.

- **COMPETENCY AREA II: Professional Coursework in Childhood Development and Education (27 credits):** EDE 621 (3), EDE 738 (3), EDE 739 (3), EDE 715 (3), EDE 716 (3), EDE 717 (3), EDE 718 (3), SPE 703 (3), EDE 727 (3).

- (1) Successful application to the Student Teaching Coordinator.
- (2) Complete at least 18 credits in Competency Area II.

Student Teaching and Seminar (6 credits): EDE 795 (4) and EDE 783 (2)

OR: *Student Internship and Seminar (3 credits):* EDE 783 (2), EDE 784 (1).

This requirement does not apply to Students with Initial or Provisional Certification.

- (1) Successfully complete student teaching or internship.
- (2) Submit an academic portfolio for each course of the first 36 credits, with evidence of achieved outcomes.
- (3) Apply for Initial or Professional Certification.

- **COMPETENCY AREA III: Professional Practice in Childhood Education (6 credits):** EDE 756 (3), EDE 757 (3).

COURSES IN EARLY CHILDHOOD EDUCATION

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

***EDC 701: Educational Psychology, Child Study, and Development.** *30 hours plus fieldwork, 3 credits.* Study of factors affecting development and human growth from conception through eight years. Developmental theories and research findings related to the physical, emotional, cognitive, and social growth of the child. Personality theories related to the development of self-concept will be examined. Diagnostic and assessment techniques and measures will be studied. Specific child-study observational skills and procedures will be developed. Pupil evaluation, class assessment, and testing related to child study and development will be made possible through field experiences.

***EDC 702: Educational Psychology, Learning.** *60 hours plus fieldwork, 6 credits.* Study of factors affecting learning from birth through eight years; learning theories and research findings related to the normal and special child; application of learning theories to mainstreamed classes. Emphasis on maturation, readiness, and basic-skill acquisition. Diagnostic and assessment techniques and measures will be applied in field settings. Three learning modules will be included: sensorimotor, communication and conceptual, logical, and reflective thinking.

***EDC 703: Program Planning for Early Childhood.** *30 hours plus confs., 3 credits.* Analysis of factors affecting the design and development of educational programs in terms of educational goals and mental health principles.

***EDC 704: Early Childhood Program Trends.** *30 hours plus confs., 3 credits.* Early childhood program trends in relation to historical, philosophical, and current community and social needs. Patterns will be examined and analyzed. A survey of a broad range of programs will be examined through the use of films, school visits, and speakers, as well as individualized field experiences.

EDC 713: Literacy Development in Early Childhood Settings, Birth to Grade 2. *3 hours, 3 credits.* Exploration of ways in which infants, toddlers, and young children develop language and literacy in family, early care, and school settings. Approaches to literacy development, assessment, and instruction, including use of media and technology within an integrated curriculum that meets national and State standards. Visits to early childhood settings with diverse populations, action research, and the development of an academic portfolio. PREREQ: EDC 722. COREQ: EDC 714. No student can receive credit for both EDE 713 and EDC 713.

EDC 714: Social Studies Concept Development in Early Childhood Settings, Birth to Grade 2. *3 hours, 3 credits.* Exploration of ways in which infants, toddlers, and young children develop an understanding of basic human needs and interdependence in family, early care, and school settings. Approaches to social studies, assessment, and instruction, including use of media and technology within an integrated curriculum that meets national and State standards. Visits to early childhood settings with diverse populations, action research, and the development of an academic portfolio. PREREQ: EDC 722. COREQ: EDC 713. No student can receive credit for both EDE 714 and EDC 714.

EDC 715: Mathematical Concept Formation in Early Childhood Settings, Birth to Grade 2. *3 hours, 3 credits.* Exploration of ways in which infants, toddlers, and young children develop an understanding of mathematical concepts in family, early care, and school settings. Approaches to assessment and documentation in young children's mathematics development through the use of concrete materials and media and technology consistent with national and State standards. Visits to early childhood settings with diverse populations, action research, and the development of an academic portfolio. PREREQ: EDC 722. COREQ: EDC 716.

EDC 716: Developing Young Children's Concepts in Art, Birth to Grade 2. *3 hours, 3 credits.* Exploration of ways in which young children develop appreciation of art in family, neighborhood, early care, and school settings. Approaches to assessment and documentation of children's artistic development and expressions of ideas in art using concrete materials, appropriate tools from media and technology, drawings and diagrams, analogy, and modeling consistent with national and State standards. Visits to early childhood settings with diverse populations, action research, and the development of an academic portfolio. PREREQ: EDC 722. COREQ: EDC 715.

EDC 717: Developing Science Concepts in Early Childhood Settings, Birth to Grade 2. *3 hours, 3 credits.* Exploration of ways in which infants, toddlers, and young children develop an understanding of science in family, early care, and school settings. Approaches to science documentation, assessment, and instruction, including media and technology within an integrated curriculum to meet national and State standards. Visits to early childhood settings with diverse populations, action research, and the development of an academic portfolio. PREREQ: EDC 722, one undergraduate or graduate laboratory science course. COREQ: EDC 718.

EDC 718: Developing Music Appreciation in Early Childhood Settings, Birth to Grade 2. *3 hours, 3 credits.* Exploration of ways in which infants, toddlers, and young children learn to appreciate and create music in family, early care, and school settings. Approaches to music development, assessment, and instructional strategies, including use of media and technology within an integrated curriculum that meets national and State standards. The course requires visits to early childhood settings with diverse populations, action research, and the development of an academic portfolio. PREREQ: EDC 722. COREQ: EDC 717.

EDC 721: Child Study and Developmental Assessment, Birth to Grade 2. 3 hours, 3 credits. Extended study of the integrated factors affecting infants, toddlers, and young children's physical, social, emotional, cognitive, language, and aesthetic development through observation, case study, and exposure to research and dominant theories of child development and learning through multiple technologies. Assessment of how young children differ in their development and approaches to supporting individual development; assessment of conditions that affect young children's development, including risk factors and patterns of specific disabilities, and cultural and linguistic diversity and significance of sociocultural and political contexts. Requires fieldwork with children, action research, and the development of an academic portfolio. COREQ: EDC 722.

EDC 722: Child Development and Program Design in Early Childhood Settings, Birth to Grade 2. 3 hours, 3 credits. Design, implementation, and assessment of developmentally appropriate programs and instructional practices based on: knowledge of the needs and interests of young children, including those with disabilities and diverse cultural and linguistic backgrounds; knowledge of the community; curriculum goals; and City, State, and national standards. Study of model programs for, and issues related to, programs for young children, reflecting the sociocultural, historical, and political forces that influence the diverse delivery systems through which programs are offered for young children and their families. Focus on the health, safety, physical, emotional, social, cognitive, cultural, and aesthetic aspects of programs. Requires student observation, action research, appropriate use of media and technology, and an academic portfolio. COREQ: EDC 721.

EDC/EDE 727: Teaching English as a Second Language (Pre-K to Grade 6). 4 hours, 3 credits. Methods and materials for teaching children whose native language is not English. Focus on how to teach content with an emphasis on English language arts, using English as a Second Language methodologies. Attention on addressing the influence of language, cultural, and community orientation, and prior schooling experiences on learning in a second language. The course requires work with children in E.S.L. classrooms. PREREQ: Competency Area I and Step 2; EDC 730/EDE 751, and one of the following: EDC 732/EDE 752 or EDC/EDE 733.

EDC 730: Understanding and Documenting Young Bilingual Children's Literacy Development and Concepts of the World Around Them, Birth to Grade 2. 6 hours, 6 credits. Exploration of the diverse ways that infants, toddlers, and young bilingual, bicultural children develop language and literacy. Understanding of basic human needs and interdependence in family, early care, and school settings. Study of approaches to literacy and the social studies documentation and assessment and instructional strategies in native and second languages through media and technology within an integrated curriculum. Requires fieldwork with children, action research, and an academic portfolio. PREREQ: Successful completion of Competency Area I and Step 2.

EDC 731: Understanding and Documenting Young Children's Literacy Development and Concepts of the World Around Them, Birth to Grade 2. 6 hours, 6 credits. Exploration of diverse ways in which infants, toddlers, and young children develop language and literacy and understand basic human needs and human interdependence in family, early care, and school settings. Study of approaches to literacy and the social studies documentation and assessment and instructional strategies, through media and technology as appropriate within an integrated curriculum. Requires fieldwork with children, action research, and an academic portfolio. PREREQ: Successful completion of Competency Area I and Step 2.

EDC 732: Understanding and Documenting Young Children's Concepts of Mathematics and Art, Birth to Grade 2. 6 hours, 6 credits. Exploration of the diverse ways in which infants, toddlers, and young children develop an understanding of mathematical concepts and the appreciation and creation of art in family, early

care, and school settings. Study of approaches to formal and informal documentation and assessment of children's development in mathematics and art to insure the continuous development of problem-solving processes and expression of ideas in both mathematics and art. Construction of meaning through a variety of instructional opportunities that support the intellectual and social development of diverse learners, using appropriate tools from media and technology, concrete materials, drawings and diagrams, analogy, and modeling. Requires fieldwork with children, action research, and an academic portfolio. PREREQ: Successful completion of Competency Area I and Step 2.

EDC 733: Understanding and Documenting Young Children's Concepts of the Sciences and Music, Birth to Grade 2. 6 hours, 6 credits. Exploration of the diverse ways in which infants, toddlers, and young children develop an understanding of the sciences and come to appreciate and create music in family, early care, and school settings. Study of approaches to the sciences and music documentation and assessment and instructional strategies, through media and technology as appropriate within an integrated curriculum. Requires fieldwork with children, action research, and an academic portfolio. PREREQ: Successful completion of Competency Area I and Step 2, BIO 150, CHE 136, PHY 135, GEO 166 or equivalent.

EDC 734: Programs and Environments for Infants and Toddler, Birth to 3 Years. 3 hours, 3 credits. Study of five areas of infant and toddler development (physical, cognitive, emotional, social, and language), including children with special developmental needs. Implementation of Developmental Profiles for infants and toddlers as a means for program development and curriculum design for very young children in care. Design of appropriate environments for infants, toddlers, and staff based on health, safety, physical, social, emotional, cognitive, aesthetic, cultural, and family contexts. Examination of caregivers' self-health and professional performance. Observations in infant/toddler fieldwork settings, action research, use of media and technology, and an academic portfolio. PREREQ: EDC 721 and EDC 722.

EDC 735: Family, School, and Community Interaction in Early Childhood Settings, Birth to Grade 2. 3 hours, 3 credits. Study of a theoretical framework for developing skills among teachers to support parental involvement in the education of infants, toddlers, and young children at home, in early care, and in school settings. Emphasis on culturally and economically diverse communities and relationships to community organizations. Fieldwork in early childhood settings and community organizations serving diverse populations, action research, and an academic portfolio. PREREQ: EDC 721 and 722. No student can receive credit for both EDC 735 and EDE 735.

EDC 738: Literacy in Bilingual/Bicultural Early Childhood Settings, Birth to Grade 2. 3 hours, 3 credits. Exploration of ways that infants, toddlers, and young bilingual, bicultural children develop language and literacy in family, early care, and school settings. Approaches to literacy assessment and instruction in both the native and second languages, including use of media and technology within an integrated curriculum to meet national and State standards. Visits to early childhood bilingual settings, action research, and the development of an academic portfolio. PREREQ: EDC 722. COREQ: EDC 739. *Note: Required course for Bilingual Extension.*

EDC 739: Social Studies Concept Development in Bilingual/Bicultural Early Childhood Settings, Birth to Grade 2. 3 hours, 3 credits. Exploration of ways infants, toddlers, and young bilingual, bicultural children develop an understanding of basic human needs and interdependence in family, early care, and school settings. Approaches to social studies concepts, assessment, and instruction in both the native and second languages, including use of media and technology within an integrated curriculum to meet national and State standards. Visits to early childhood bilingual settings, action research, and the development of an academic portfolio. PREREQ: EDC 722. COREQ: EDC 738. *Note: Required course for Bilingual Extension.*

EDC 745: Teaching Internship and Seminar I. *1 hour, 1 credit.* (For matriculated students in early childhood education who are not certified to teach but who hold teaching positions.) Observation, evaluation, assessment, and structured support via interaction with peers and Lehman faculty around day-to-day, on-site classroom teaching practice. PREREQ: Matriculated status.

EDC 746: Teaching Internship and Seminar II. *1 hour, 1 credit.* (For matriculated students in early childhood education who are not certified to teach but who hold teaching positions.) Observation, evaluation, assessment, and structured support via interaction with peers and Lehman faculty around day-to-day, on-site classroom teaching practice. PREREQ: EDC 745.

EDC 747: Teaching Internship and Seminar III. *2 hours, 2 credits.* (For matriculated students in early childhood education who are not certified to teach but who assume teaching positions just prior to or at the outset of their second semester of matriculation.) Observation, evaluation, assessment, and structured support via interaction with peers and Lehman faculty around day-to-day, on-site classroom teaching practice. PREREQ: Matriculated status: 12-15 credits.

EDC 748: Teaching Internship and Seminar IV. *2 hours, 2 credits.* (For matriculated students in early childhood education who are not certified to teach but who hold teaching positions.) Observation, evaluation, assessment, and structured support via interaction with peers and Lehman faculty around day-to-day, on-site classroom teaching practice. PREREQ: EDC 746 or EDC 747.

EDC 749: Teaching Internship and Seminar V. *2 hours, 2 credits.* (For matriculated students in early childhood education who are not certified to teach but who hold teaching positions.) Observation, evaluation, assessment, and structured support via interaction with peers and Lehman faculty around day-to-day, on-site classroom teaching practice. PREREQ: EDC 748.

EDC 756: Teacher as Researcher. *3 hours, 3 credits.* Continued development and utilization of action research skills appropriate to an area of specialization in early childhood culminating in a potentially publishable article submitted to E.R.I.C., to an appropriate early childhood journal, and to a Lehman in-house publication. PREREQ: Competency Area II and Step 4. COREQ: EDC 757. No student can receive credit for both EDC 756 and EDE 756.

EDC 757: Ethics and Professionalism in Early Childhood Teaching. *3 hours, 3 credits.* Study of the early childhood teaching profession, its multiple historical, philosophical, and social foundations. Analysis of teaching practices through the use of self-assessment as a form of evaluation and professional portfolio development. Examination of the purpose and meaning of teaching and the contributions made to the profession through analysis of their own teaching experiences. PREREQ: Competency Area II and Step 4. COREQ: EDC 756. No student can receive credit for both EDC 757 and EDE 757.

EDC 758: Intensive Teaching Internship and Seminar I. *3 hours, 3 credits.* (For matriculated students who are not certified to teach but who hold teaching positions.) Observation, evaluation, assessment, and structured support via interaction with peers and Lehman faculty around day-to-day, on-site classroom teaching practice. PREREQ: Matriculated status.

EDC 759: Intensive Teaching Internship and Seminar II. *3 hours, 3 credits.* (For matriculated students in early childhood education who are not certified to teach but who hold teaching positions.) Observation, evaluation, assessment, and structured support via interaction with peers and Lehman faculty around day-to-day, on-site classroom teaching practice. PREREQ: EDC 758.

EDC 770-771: Advanced Studies in the Curriculum I and II. *Each 30 hours plus confs., 3 credits.* Curriculum content, methods, and materials in early childhood education as related to affective, cognitive, and social development within the early childhood education program. Different curricular areas will be presented for special consideration each semester.

***EDC 773: Parent-Teacher-Child Relationships.** *30 hours plus confs., 3 credits.* Designed to help those in early childhood and elementary education understand and effectively handle questions arising from parent-child relationships and teacher-parent-child relationships. Readings, case histories, and data drawn from individual experiences will be used to explore the dynamics of the most frequently encountered problems of children in classrooms. Methods will be developed to form constructive relationships with children, parents, and ancillary school or social agency personnel.

EDC 776: Special Studies in Early Childhood Education. *15-45 hours, 1-3 credits.* (May be repeated for up to 6 credits with permission of graduate adviser as the topic changes.) Investigation of specific developments, problems, or practices in the field of early childhood education. Topics and credits will vary and be announced each semester.

***EDC 778: Workshop--Teaching as Process in Early Childhood Education.** *30 hours plus confs., 3 credits.* Providing an understanding of the process of teaching. Analysis of the role of the teacher through an examination of literature, films, and related research. Development of models of teaching; examination and refinement of teaching skills; and examination of the hierarchical functioning of teachers in classrooms, schools, and the community.

***EDC 779: Administration and Supervision in Early Childhood Education.** *30 hours plus confs., 3 credits.* Responsibilities and functions of administrators and supervisors in staff relationships. Agency and community contacts will be analyzed. Personnel, budget, supplies, and in-service training responsibilities related to nursery schools, child-care centers, private schools, and other institutions for young children will be examined.

EDC 781: Supervised Student Teaching in Bilingual Settings, Pre-K to Grade 2. *300 hours, 4 credits* The student teaching experience will be conducted collaboratively with college, school, and community partners in providing opportunities for prospective teachers to continue to establish best professional practices developed in the Certification Sequence and successfully evaluate the outcomes of those practices. The clinical experience will take place in bilingual/multicultural settings that include students with disabilities and students of different early childhood age/grade levels (pre-K, K, Grades 1-2), with particular emphasis on the bilingual classroom. Student teachers are required to spend five full days each week in their school placement and two hours each week in a professional development workshop. PREREQ: EDC 730; EDC 732, or EDC 733 and Step 3. COREQ: EDC/EDE 483: Student Teaching Seminar.

EDC/EDE 783: Student Teaching Seminar. *2 hours, 2 credits.* Utilization of the classroom setting as laboratory; realistic examination of the multidimensional issues that reflect the complexities of teaching. Further development of the ability to problem solve, to consider flexible and varied interactions with children, and to reflect so that students develop as competent, qualified, and caring learners/teachers. Analysis and discussion of concerns, fears, and views within a safe, supportive environment. PREREQ: EDC 730 or EDC 731; EDC 732 or ECE 733 in Competency Area II; and Step 3. COREQ: EDC 790, or EDC 781.

EDC 784: Supervised Student Teaching Internship, Birth to Grade 2. *1 credit.* Collaboration between college and school partners to provide opportunities for uncertified teachers in classrooms to continue to establish best professional practices developed in the Certification Sequence and successfully evaluate the outcomes of those practices in the teacher's current setting, supervised by College faculty. PREREQ: Successful completion of 12 credits in Competency II and Step 3. COREQ: EDC/EDE 783.

***EDC 790: Student Teaching Internship for N-III Teachers.** *Semester field placement and confs., 3 credits.* A course in student teaching. This internship will provide for placements at several early childhood levels: family day care, day care, nursery, kindergarten, early childhood centers, and primary grades I-III. Applicants will be required to meet the demands of early childhood personnel. Negative chest x-ray report required.

EDC 790: Supervised Student Teaching--Pre-K to Grade 2. *300 hours, 4 credits.* The student teaching experience will be conducted collaboratively with college, school and community partners in providing opportunities for prospective teachers to continue to establish best professional practices developed in the Certification Sequence and successfully evaluate the outcomes of those practices. The clinical experience will take place in a variety of settings that include culturally diverse populations, students with disabilities, and students of different age/grade levels (pre-K, K, and Grades 1-2). Student teachers are required to spend five full days each week in their school placement and two hours each week in a professional development workshop. PREREQ: EDC 731; EDC 732 or 733; and Step 3. COREQ: EDC/EDE 783.

COURSES IN CHILDHOOD EDUCATION

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

EDE 510: Schools in a Bilingual/Bicultural Hispanic Community. *3 hours, 3 credits.* Analysis of the structure and function of schools in a bilingual/bicultural Hispanic community and the influence of the community on the development of school programs. (English/Spanish)

EDE 512: A Multi-arts Approach to Curriculum Development in the Elementary School with Emphasis on Hispanic Cultures. *3 hours, 3 credits.* An exploration of historic and contemporary Hispanic arts and the development of curriculum units for bilingual/bicultural students.

EDE 611-612: Seminar in Elementary School Teaching, I and II. *Each 1 hour, 1 credit.* Analysis of problems or practices in elementary school teaching. PREREQ: Open only to matriculants in the Program in Elementary Education who are teaching full time and have no previous courses in elementary education.

EDE 621: Introduction to Teaching Reading in the Elementary School. *3 hours, 3 credits.* For students who have never taken a course in the teaching of reading. A study of the reading process and strategies for teaching reading, including language development, reading readiness, word recognition, analysis, and comprehension. Formal and informal measures for assessing pupil needs, organizational and classroom management techniques, instructional approaches, and materials for elementary schools will be examined.

EDE 622: Advanced Methods in Teaching Reading in Elementary School. *3 hours, 3 credits.* A study of strategies for teaching reading, including critical thinking and study skills and content area reading. Formal and informal measures for assessing pupil needs, organizational and classroom management techniques, instructional approaches, and materials for the reading experience will be examined. PREREQ: EDE 630 and 621.

***EDE 630: Psychology of Development and Learning in Elementary Education.** *3 hours, 3 credits.* A beginning course for students who have not taken a course in educational psychology. Study of theories and research regarding development and learning from birth through early adolescence, with application to the elementary classroom. Classroom teaching discussed and evaluated in relation to theories, research, and professional development.

***EDE 632: Curriculum Development through the Social Sciences in the Elementary School.** *3 hours, 3 credits.* Investigation of basic principles of curriculum development in elementary schools, using the content and methodologies of the social sciences to organize social studies instruction. Emphasis on multi-ethnic/multicultural education in a pluralistic society. PREREQ: EDE 630 (or equivalent).

***EDE 640: Teaching Mathematics in the Elementary School.** *3 hours, 3 credits.* Study of the organization, content, and methods of teaching in elementary mathematics programs. Emphasis on using research results to evaluate critically existing curricula and to organize teaching approaches that lead to the development of problem-solving skills. PREREQ: Passing grade on Departmental Mathematics Content Exam.

***EDE 651: Teaching Science in the Elementary School.** *3 hours, 3 credits.* Improving the elementary school teacher's cognitive knowledge in the sciences. Helping the teacher utilize concepts suggested by content for the purpose of developing activities and materials suitable for the effective teaching of science as an inquiry process. PREREQ: EDE 630 (or equivalent).

***EDE/ESC 700: Psychology in Education, Group Dynamics.** *3 hours, 3 credits.* A laboratory course using here-and-now experiences to study interpersonal perceptions; communication networks; and group decision-making patterns, leadership, and structure. Develop skills in diagnosing and improving group functioning. PREREQ: Full-time teaching experience.

***EDE 701: Psychology in Elementary Education, Advanced Educational Psychology.** *3 hours, 3 credits.* Current psychological theory related to children's basic learning processes. Consideration of multicultural, economic, ethnic, and racial factors in society as they affect classroom learning. Formal and informal approaches to the evaluation of learning as a basis for curriculum decision-making. PREREQ: Previous course in educational psychology. COREQ: Currently teaching.

***EDE/ESC 702: Foundations of Education.** *3 hours, 3 credits.* Studies of critical periods and movements in American education history, with emphasis on social, political, and intellectual developments and the role of leading educational theorists as agents of change in education.

***EDE/ESC 703: School and Community.** *3 hours, 3 credits.* Analysis, from historical and contemporary perspectives, of education as a social process and social institution in an urban setting. Emphasis on the teacher's role as facilitator of understanding and change with parents, children, and community in multicultural, economic, ethnic, and racial school settings. A minimum of ten hours community field experience is required.

***EDE 704: Educational Evaluation.** *3 hours, 3 credits.* Fundamentals of measurement and statistics for the classroom teacher. Emphasis on the planning, construction, administration, analysis, and evaluation of tests and examinations used by the teacher, including teacher-made and standardized tests. The collection and analysis of data are required.

***EDE 705: Project Seminar I.** *3 hours, 3 credits.* Formulation by each student of a significant project related to teaching in early childhood or elementary education: definition, design, method for carrying out the project, recapitulation of relevant material, and completion of an outline. Students will work individually, or in small groups, with an instructor. PREREQ: Graduate Adviser's permission.

***EDE 706: Project Seminar II.** *3 hours, 3 credits.* Completion of the project undertaken in EDE 705, including a written report on the research or curriculum development carried out, results of the work, basis for evaluating the results, and the author's recommendations to others interested in the subject. PREREQ: EDE 705.

***EDE 707: Introduction to Educational Research I.** *3 hours, 3 credits.* Formulation of a research problem by each student; its definition, the method of study appropriate to the problem, recapitulation of pertinent studies, and collection and analysis of data. Students will work individually with a Graduate Adviser and in small groups. PREREQ: EDE 704 and instructor's permission.

***EDE 708: Introduction to Educational Research II.** *3 hours, 3 credits.* Formulation of a research problem by each student; its definition, the method of study appropriate to the problem, recapitulation of pertinent studies, and collection and analysis of data. Students will work individually with a Graduate Adviser and in small groups. PREREQ: EDE 707.

EDE 713: Literacy in Childhood Settings Grades 1 to 6. 3 hours, 3 credits. Exploration of ways in which children develop language and literacy in family, neighborhood, and school settings. Approaches to literacy, assessment, and instruction, including use of media and technology, with integrated curricula that meet State and national standards. Work with children in childhood settings with diverse populations, action research, development of an academic portfolio. PREREQ: EDE 722. COREQ: EDE 714. No student can receive credit for both EDE 713 and EDC 713.

EDE 714: Learning and Teaching Social Studies in Childhood Settings—Grades 1 to 6. 3 hours, 3 credits. Exploration of the diverse ways in which children develop an understanding of basic human needs and interdependence in family, neighborhood, and school settings. Study of approaches to social studies, and assessment and instructional strategies, through media and technology, within an integrated curricula to meet State and national standards. Includes work with children in childhood settings with diverse populations, integrative seminar, action research, development of an academic portfolio. PREREQ: EDE 721, EDE 722. COREQ: EDE: 713. No student can receive credit for both EDE 714 and EDC 714.

EDE 715: Learning and Teaching Mathematics in Childhood Settings—Grades 1 to 6. 3 hours, 3 credits. Exploration of the diverse ways in which children develop an understanding of mathematical concepts in family, neighborhood, and school settings. Study of approaches to assessment and documentation of children's development in mathematics to insure continuous development of problem-solving processes and expression of ideas in mathematics. State and national standards are met using appropriate tools from media and technology, concrete materials, drawings and diagrams, analogy and modeling. The course requires visits to childhood settings with diverse populations, action research, and the development of an academic portfolio. PREREQ: EDE 721, EDE 722. COREQ: EDE 716.

EDE 716: Learning and Teaching Art in Childhood Settings—Grades 1 to 6. 3 hours, 3 credits. Exploration of the diverse ways in which children develop the appreciation of art in family, neighborhood, and school settings. Study of approaches to assessment and documentation of children's artistic development to include focus on problem-solving processes and expression of ideas in art. Appropriate tools from media and technology, concrete materials, drawings and diagrams, analogy and modeling will be utilized to meet State and national standards. The course requires visits to childhood settings with diverse populations, action research, and the development of an academic portfolio. PREREQ: EDE 721, EDE 722. COREQ: EDE 715.

EDE 717: Learning and Teaching Science in Childhood Settings—Grades 1 to 6. 3 hours, 3 credits. Exploration of ways in which children develop an understanding of science in family, neighborhood, and school settings. Approaches to science, documentation and assessment of instruction, including the use of media and technology within an integrated curriculum to meet State and national standards. The course requires visits to childhood settings with diverse populations, action research, and the development of an academic portfolio. PREREQ: EDE 722, one undergraduate or graduate laboratory science course. COREQ: EDE 718.

EDE 718: Learning and Teaching Music in Childhood Settings—Grades 1 to 6. 3 hours, 3 credits. Exploration of the diverse ways in which children come to appreciate and create music in family, neighborhood, and school settings. Study of approaches to music assessment and instructional strategies through media and technology as appropriate within an integrated curriculum to meet State and national standards. The course requires visits to childhood settings with diverse populations, action research, and the development of an academic portfolio. PREREQ: EDE 721, EDE 722. COREQ: EDE 717.

EDE 721: Child Study and Developmental Assessment—Grade 1 to 6. 3 hours, 3 credits. Study of the integrated factors affecting children's physical, social, emotional, cognitive, language, and aesthetic development. Exposure to dominant theories of child development and learning through multiple technologies. Informal assessment of how children differ in their development and conditions that affect children's development, including risk factors, patterns of specific disabilities, cultural and linguistic diversity, and sociocultural and political contexts. Observations in childhood settings with diverse populations, action research, and the development of an academic portfolio. COREQ: EDE 722. No student can receive credit for both EDE 721 and EDC 721.

EDE 722: Child Development and Program Design in Childhood Settings—Grades 1 to 6. 3 hours, 3 credits. Design, implementation, and assessment of developmentally appropriate programs and instructional practices based on knowledge of the needs and interests of children, including those with disabilities and diverse cultural and linguistic backgrounds, as well as on knowledge of the community; of curriculum goals; and of City, State, and national standards. Study of model programs for, and issues related to, programs for children reflecting sociocultural, historical, and political forces that influence the diverse delivery systems through which programs are offered for children and their families. Focus on the health, safety, physical, emotional, social, cognitive, cultural, and aesthetic aspects of programs. Observations in childhood settings with diverse populations, action research, appropriate use of media and technology, development of an academic portfolio. COREQ: EDE 721. No student can receive credit for both EDE 722 and EDC 722.

EDE/EDC 727: Teaching English as a Second Language (Pre-K to Grade 6). 4 hours, 3 credits. Methods and materials for teaching children whose native language is not English. Focus on how to teach content with an emphasis on English language arts, using English as a Second Language methodologies. Attention on addressing the influence of language, cultural and community orientation, and prior schooling experiences on learning in a second language. The course requires work with children in ESL classrooms. PREREQ: Competency Area I and Step 2; EDC 738/ EDE 738, SPE 703, and one of the following: EDC 739/EDE 739 or EDC/EDE 733. (Note: Required course for Bilingual Extension.)

EDE 728: Literature in the Elementary School. 3 hours, 3 credits. A critical survey of the literature available for elementary school children, with special emphasis on the use of such material for enriching a basal reading program and/or serving in an individualized reading program.

***EDE 730: Science Instruction in the Elementary School, Advanced Course.** 3 hours, 3 credits. A course designed to supplement and extend the elementary school teacher's abilities in science teaching. Includes the detailed planning of several science units. Special attention is given to science demonstrations and laboratory work, including the assembly of apparatus and the presentation of the unit for class discussion. PREREQ: One year of college laboratory science and a previous course in the teaching of science in the elementary school.

***EDE 731: Problems of Coordinating Science Instruction in the Elementary School.** 3 hours, 3 credits. A course designed to prepare resource teachers for coordinating sciences in the elementary schools. It will include a study of the objectives and content of elementary science curricula; training in the methods and techniques of elementary science teaching; demonstration and laboratory materials, textbooks, reference books, periodicals, and other teaching aids; the problems of ordering and storing science supplies; the use of audiovisual devices; community resources and the conducting of field trips; participation in science fairs and exhibits; science assemblies; and the evaluation of elementary science teaching. One of the important activities will be setting up grade conferences, workshops, and other types of training programs for teachers.

***EDE 732: Curriculum Development in Environmental Education for the Elementary School.** 3 hours, including confs. and/or fieldwork, 3 credits. Study of the environment as an integrating theme in the elementary school curriculum. Physical, biological, psychological, and sociological environmental factors: their relationships and interrelationships are considered. Current trends and developments in curriculum, teaching techniques and materials, and community resources will be explored. PREREQ: One year of a college laboratory science and one course in the social sciences.

EDE 733: Learning and Teaching Science and Music in Childhood Settings—Grades 1 to 6. 6 hours, 6 credits. Exploration of the diverse ways in which children develop an understanding of the sciences and come to appreciate and create music in family, neighborhood, and school settings. Study of the approaches to the sciences and music documentation, and assessment and instructional strategies, through media and technology as appropriate within an integrated curriculum. The course requires fieldwork with children in childhood settings with diverse populations, action research, and the development of an academic portfolio. PREREQ: Competency Area I and Step 2. *No student can receive credit for both EDE 733 and EDC 733.*

EDE 735: Family, School, and Community Interaction in Childhood Contexts—Grades 1 to 6. 3 hours, 3 credits. Study of a theoretical framework for developing skills among teachers to support parental involvement in the education of children at home and in varied childhood settings. Emphasis on culturally and economically diverse communities and relationships to community organizations. Fieldwork in childhood settings and community organizations serving diverse populations, action research, the appropriate use of media and technology, and the development of an academic portfolio. PREREQ: EDE 721 and EDE 722. *No student can receive credit for both EDE 735 and EDC 735.*

EDE 738: Learning and Teaching Literacy in Bilingual/Bicultural Childhood Settings—Grades 1 to 6. 3 hours, 3 credits. Exploration of the diverse ways that bilingual, bicultural children develop language and literacy in family, neighborhood, and school settings. Study of approaches to literacy, and assessment and instructional strategies in both the native and second languages, through media and technology as appropriate within an integrated curriculum to meet State and national standards. The course requires visits to childhood bilingual settings, action research, and the development of an academic portfolio. PREREQ: EDE 721, EDE 722. COREQ: EDE 739.

EDE 739: Learning and Teaching Social Studies in Bilingual/Bicultural Childhood Settings—Grades 1 to 6. 3 hours, 3 credits. Exploration of the diverse ways that bilingual/bicultural children develop an understanding of basic human needs and interdependence in family, neighborhood, and school settings. Study of approaches to social studies, and assessment and instructional strategies in both the native and second languages, through media and technology as appropriate within an integrated curriculum to meet State and national standards. The course requires visits to childhood bilingual settings, action research, and the development of an academic portfolio. PREREQ: EDE 721, EDE 722. COREQ: EDE 738.

***EDE 740: Studies in the Teaching of Elementary Mathematics, Advanced Course.** 3 hours, 3 credits. Teaching and learning problems in developing mathematical concepts and computational skills in the elementary and intermediate school years. Recent research and new programs in the teaching of elementary school mathematics. PREREQ: A previous course in methods of teaching mathematics in the elementary school.

***EDE 741: Materials and Methods for Mathematics Education.** 3 hours, 3 credits. Development and use of mathematics laboratories and multimedia approaches for teaching elementary school mathematics. PREREQ: EDE 740.

***EDE 742: Supervision and Coordination of Elementary School Mathematics.** 3 hours, 3 credits. Development of elementary school mathematics programs, including the psychology of learning mathematics, testing and evaluation, selection of textbooks and other materials, and problems in supervision. PREREQ: EDE 740.

***EDE 743: Diagnosis of Difficulties in Learning Elementary School Mathematics.** 3 hours, 3 credits. An investigation of children's difficulties in learning elementary school mathematics. Procedures for measuring achievement in mathematics. Practice, under supervision, in diagnosing particular students' difficulties with mathematics. PREREQ: EDE 740.

***EDE 744: Practicum in Developing Remedial Programs for Children Experiencing Difficulty in Learning Elementary Mathematics.** 3 hours, 3 credits. Using research for designing, implementing, and evaluating remedial elementary mathematics programs for children with specific difficulties in learning mathematics. PRE- or COREQ: EDE 743.

EDE 745: Teaching Internship and Seminar I. 1 hour, 1 credit. (For matriculated students in Childhood Education who are not certified to teach but who hold teaching positions.) Observation, evaluation, assessment, and structured support of students via interaction with peers and Lehman faculty around day-to-day, on-site classroom teaching practice. PREREQ: Matriculated status.

EDE 746: Teaching Internship and Seminar II. 1 hour, 1 credit. (For matriculated students in Childhood Education who are not certified to teach but who hold teaching positions.) Observation, evaluation, assessment, and structured support via interaction with peers and Lehman faculty around day-to-day, on-site classroom teaching practice. PREREQ: EDE 745.

EDE 747: Teaching Internship and Seminar III. 2 hours, 2 credits. (For matriculated students in childhood education who are not certified to teach but who assume teaching positions just prior to or at the outset of their second semester of matriculation.) Observation, evaluation, assessment, and structured support via interaction with peers and Lehman faculty around day-to-day, on-site classroom teaching practice. PREREQ: Matriculation: 12-15 credits.

EDE 748: Teaching Internship and Seminar IV. 2 hours, 2 credits. (For matriculated students in Childhood Education who are not certified to teach but who hold teaching positions.) Observation, evaluation, assessment, and structured support via interaction with peers and Lehman faculty around day-to-day, on-site classroom teaching practice. PREREQ: EDE 746 or EDE 747.

EDE 749: Teaching Internship and Seminar V. 2 hours, 2 credits. (For matriculated students in Childhood Education who are not certified to teach but who hold teaching positions.) Observation, evaluation, assessment, and structured support via interaction with peers and Lehman faculty around day-to-day, on-site classroom teaching practice. PREREQ: EDE 748.

***EDE 750: Studies in the Teaching of Elementary Social Studies, Advanced Course.** 3 hours, 3 credits. Teaching and learning problems in social studies programs in the elementary school. Recent research and new curricula in elementary social studies.

EDE 751: Learning and Teaching Literacy and the Social Studies in Bilingual/Bicultural Childhood Settings—Grades 1 to 6. 6 hours, 6 credits. Exploration in the diverse ways that bilingual, bicultural children develop language and literacy and an understanding of basic human needs and human interdependence in family, neighborhood, and school settings. Study of approaches to literacy and social studies documentation, and assessment and instructional strategies, in both native and second languages through media and technology as appropriate within an integrated curriculum. Requires fieldwork with children in childhood bilingual settings, action research, and development of academic portfolio. PREREQ: Competency Area I and Step 2. *No student can receive credit for both EDE 751 and EDC 730.*

EDE 752: Learning and Teaching Literacy and the Social Studies in Childhood Settings—Grades 1 to 6. 6 hours, 6 credits. Exploration of the diverse ways in which children develop language and literacy and an understanding of basic human needs and human interdependence in family, neighborhood, and school settings. Study of approaches to literacy and social studies documentation, and assessment and instructional strategies, through media and technology as appropriate within an integrated curriculum. Requires fieldwork with children in childhood settings with diverse populations, integrative seminar, action research, development of an academic portfolio. PREREQ: Competency Area I and Step 2. *No student can receive credit for both EDE 752 and EDC 731.*

EDE 753: Learning and Teaching Mathematics and Art in Childhood Settings, Grades 1 to 6. 6 hours, 6 credits. Exploration of the diverse ways in which children develop an understanding of mathematical concepts and the appreciation of art in family, neighborhood, and school settings. Study of approaches to mathematics assessment and documentation of children's development in mathematics and art to insure the continuous development of problem-solving processes and expression of ideas in both mathematics and art. Construction of meaning through instructional opportunities that support the intellectual and social development of diverse learners, using appropriate tools from media and technology, concrete materials, drawings, and diagrams, analogy, and modeling. Course requires fieldwork with children in childhood settings with diverse populations, action research, and the development of an academic portfolio. PREREQ: Competency Area I and Step 2. *No student can receive credit for both EDE 753 and EDC 732.*

***EDE 755: Advanced Methods of Teaching Music in the Elementary School.** 3 hours, 3 credits. Development of techniques for teaching sight reading, part-singing, musical improvisation and composition, musical notation, and composition of songs. Establishment of a class performance ensemble and development of assembly programs based on the maturational level and interests of the students. PRE- or COREQ: Preadmission to the M.A.T. program in music education; or permission of the Graduate Adviser in Music Education.

EDE 756: Teacher as Researcher. 3 hours, 3 credits. Continued development and utilization of action research skills appropriate to a particular area of specialization in childhood, culminating in a potentially publishable article submitted to E.R.I.C., to an appropriate childhood journal, and to a Lehman in-house publication. PREREQ: Competency Area II and Step 4. COREQ: EDE 757. *No student can receive credit for both EDE 756 and EDC 756.*

EDE 757: Ethics and Professionalism in Childhood Teaching. 3 hours, 3 credits. Study of the childhood teaching profession, its multiple historical, philosophical, and social foundations. Analysis of teaching practices through the use of self-assessment as a form of evaluation and professional portfolio development. Examination of the purpose and meaning of teaching and the contributions made to the profession through analysis of their own teaching experiences. PREREQ: Competency Area II and Step 4; COREQ: EDE 756. *No student can receive credit for both EDE 757 and EDC 757.*

EDE/ECE 758: Intensive Teaching Internship and Seminar I. 3 hours, 3 credits. (For matriculated students in childhood education who are not certified to teach but who hold teaching positions.) Observation, evaluation, assessment, and structured support via interaction with peers and Lehman faculty around day-to-day, on-site classroom teaching practice. PREREQ: Matriculated status.

EDE 759: Intensive Teaching Internship and Seminar II. 3 hours, 3 credits. (For matriculated students in Childhood Education who are not certified to teach but who hold teaching positions.) Observation, evaluation, assessment, and structured support via interaction with peers and Lehman faculty around day-to-day, on-site classroom teaching practice. PREREQ: EDE 758.

EDE 760: Second-Language Learning and Teaching in Elementary School. 3 hours, 3 credits. The psychological principles of second-language learning and their application to teaching in the elementary school, with emphasis on the language development of preadolescent school children. PREREQ: One course in educational psychology.

EDE 761: Teaching English as a Second Language in Elementary School. 3 hours, 3 credits. Implications of the nature of language for the teaching of English to elementary school children who are non-native speakers. The development and evaluation of audiolingual skills, reading, and writing, with emphasis on the phonology, structure, and vocabulary of the language. Interrelationships of language and culture. Organization and selection of learning materials suitable for elementary school.

***EDE 762-763: Workshop in the Teaching of Foreign Languages in the Elementary Schools I and II.** Each 3 hours, 3 credits. (I.) Consideration of the objectives, materials, and methods in the teaching of foreign languages to elementary school children through the study of existing literature. Discussion of problems relating to the integration of the foreign language with the total school curriculum. (II.) Practice in the preparation of materials and the development of methods suitable to the participant's school situation. PREREQ: Employment as a teacher and methods of elementary education.

EDE 764: Mainstreaming in the Elementary Classroom. 3 hours, 3 credits. Curriculum planning and management of programs for exceptional children in N-6 classroom settings. Analyzing student needs, designing goals, program planning, and testing, with emphasis on mainstreaming and implementation of individualized education programs in a self-contained classroom. PREREQ: One course in educational psychology and 6 credits in elementary education method courses.

EDE 765: Aesthetic Education in the Elementary School. 3 hours, 3 credits. Development of perceptual awareness of works of art and events in the art world: art, music, dance/movement, drama, and nature-made environment (reacting to, appreciating, and evaluating). Exploration of approaches for incorporating aesthetic education in elementary school curricula.

***EDE 768: Education Workshop for Teachers of Children of Puerto Rican Origin in the Elementary School.** 3 hours, 3 credits. A workshop to help elementary school teachers deal with the situations and problems arising in their actual school experiences. Emphasis will be on the preparation, demonstration, and discussion of instructional materials needed for developing communication skills and orientation concepts in newcomers of Puerto Rican origin within the existing organizational and curricular patterns of the elementary school. PREREQ: Employment as a teacher and a course in methods of teaching in elementary school.

***EDE 770: Quantitative Methods.** 3 hours, 3 credits. Descriptive and inferential statistics: elementary probability theory, psychological and educational variables, the nature and logic of quantitative observations, data reduction and graphic presentation, statistical computations, and tests of hypotheses and correlational analysis.

***EDE 772: Educational Tests and Measurements for Elementary School.** 3 hours, 3 credits. Systematic introductory course for graduate students. The fundamentals of interpreting elementary school test scores. The writing of objective test items for elementary school, methods of evaluating tests for use in the elementary classroom, and up-to-date instruments for testing aptitude and achievement in elementary students. PREREQ: Course in educational psychology or human development.

***EDE 775: Problems of Elementary Education in Metropolitan Areas.** 3 hours, 3 credits. Social structures of urban life and their impact on the problems and future forms of the urban elementary school. Critical examination from a variety of viewpoints of major issues arising from urbanization in curriculum, methods, pupil achievement, and organization of the elementary school. PREREQ: One course in educational foundations.

EDE 776: Special Studies in Elementary Education. 1-3 hours, 1-3 credits. (May be repeated for up to 6 credits with permission of Graduate Adviser as the topic changes.) Investigation of specific developments, problems, or practices in the field of elementary education. Topics and credits will vary and be announced each semester. PREREQ: Permission of Graduate Adviser.

EDE 777: Using the Computer in the Classroom. 3 hours, 3 credits. Exploration of the uses of the computer within the elementary school curriculum, including computer-assisted and computer-managed instruction, word processing, file handling, simulation, and inference testing. Instruction-enhancing use of commercial and teacher-developed materials. PREREQ: EDE 630 (or equivalent) and at least 6 credits in elementary school teaching methods courses.

***EDE/ESC 780: Comparative Education.** 3 hours, 3 credits. Comparative study of school organization, curricular practices, and contemporary educational problems in selected foreign countries. Special attention will be given to the study of issues that have cross-cultural dimensions.

***EDE/ESC 781: Advanced Studies in Comparative and International Education.** 3 hours, 3 credits. Intensive and specialized studies in selected systems of education using appropriate methodologies in comparative education. Review and evaluation of the work of bilateral and international technical assistance for educational development. PREREQ: EDE (ESC) 780 or instructor's permission.

EDE 782: Supervised Student Teaching in Bilingual Classrooms—Grades 1 to 6. 300 hours, 4 credits. The student teaching experience will be conducted collaboratively with college, school, and community partners in providing opportunities for prospective teachers to continue to establish best professional practices developed in the Certification Sequence and successfully evaluate the outcomes of those practices. The clinical experience will take place in bilingual/multicultural settings that include students with disabilities and students of different childhood age/grade levels (grades 1 to 6), with particular emphasis on the bilingual classroom. Student teachers are required to spend five full days each week in their school placement and two hours each week in a professional development workshop. PREREQ: EDE 751, EDE 753 or EDE 733, and Step 4; COREQ: EDC/EDE 483.

EDE/EDC 783: Student Teaching Seminar. 2 hours, 2 credits. Utilization of the classroom setting as laboratory; realistic examination of the multidimensional issues that reflect the complexities of teaching. Further development of the ability to problem solve, to consider flexible and varied interactions with children, and to reflect so that students develop as competent, qualified, and caring learners/teachers. Analysis and discussion of concerns, fears, views within a safe, supportive environment. PREREQ: EDC 730/EDE 751 or EDC 731/EDE 752; EDC 732/EDE 753 or ECE/EDE 733 in Competency Area II; and Step 3. COREQ: EDC 781, EDC 790, EDE 795, or EDE 782.

EDE 784: Supervised Student Teaching Internship—Grades 1-6. 1 credit. Collaboration between college and school partners to provide opportunities for uncertified teachers in the classroom to continue to establish best professional practices developed in the Certification Sequence and successfully evaluate the outcomes of those practices in the teachers' current setting supervised by college faculty. PREREQ: Successful completion of 12 credits in Competency II and Step 3. COREQ: EDC/EDE 783.

***EDE 788: Fundamentals of Curriculum Development.** 3 hours, 3 credits. Introduction to the philosophy, psychology, and theory underlying a variety of approaches to the curriculum in the elementary school (N-6). Analysis of curricula in different subject areas, using a variety of models. PREREQ: EDE 701.

EDE 789: Workshops in Curriculum Design. 1- 3 hours, 1-3 credits. (May be relected for credit, with the Graduate Adviser's permission, when the topic changes.) Theoretical and practical approaches to design of curricula in early childhood and elementary education. NOTE: Curriculum areas announced each semester.

EDE 790: Workshops in Curriculum Materials Development. 1-3 hours, 1-3 credits. (May be relected for credit, with the Graduate Adviser's permission, when the topic changes.) Preparation and development of instructional materials for curricula in early childhood and elementary education. NOTE: Curriculum areas announced each semester.

***EDE 791: Seminar in Problems of Elementary Education.** 3 hours, 3 credits. Seminar on problems of curriculum design and organization in early childhood and elementary education, with emphasis on issues arising in actual teaching experience. PREREQ: Full-time teaching experience.

***EDE 792: Developing In-Service Programs for Early Childhood and Elementary Education.** 3 hours and fieldwork, 3 credits. Planning, organizing, implementing, and evaluating training programs in schools, districts, and municipalities. Students will carry out field assignments. PREREQ: Teaching experience and chair's permission.

***EDE 793: Curriculum Planning and Management for Elementary Education.** 3 hours, 3 credits. A course in planning and managing curriculum for entire schools or school districts. Analyzing student needs, defining goals, organizing sequences for instruction, and evaluating curriculum coordination and leadership. PREREQ: Teaching experience and chair's permission.

EDE 795: Supervised Student Teaching—Grades 1 to 6. 300 hours, 4 credits. The student teaching experience will be conducted collaboratively with college, school, and community partners in providing opportunities for prospective teachers to continue to establish best professional practices developed in the Certification Sequence and successfully evaluate the outcomes of those practices. The clinical experience will take place in multicultural settings that include students with disabilities and students of different childhood age/grade levels (grades 1 to 6). Student teachers are required to spend five full days each week in their school placement and two hours each week in a professional development workshop. PREREQ: EDE 752, EDE 753 or EDE 733, and Step 4, COREQ: EDC/EDE 483.

***EDE 796, 797, 798: Advanced Student-Teaching Internship in Elementary School.** A minimum of 6 semester hours, 2 credits. An advanced course in student teaching in the elementary school, with an opportunity for increased participation in teaching and other school activity. Applicants will be required to meet acceptable standards of health, character, and personality and to demonstrate a command of English, both written and oral, to meet the demands of the teacher's calling. PREREQ: A course in student teaching in the elementary school equivalent to the requirement in the Lehman College Four-Year Teacher Education Program; or, for students in the curriculum for Teachers of Speech Improvement, a course in clinical practice for speech correction.

SPE 703: Language and Linguistics. 3 hours, 3 credits. Introduction to the scientific study of language, with attention to the major components of linguistic theory: phonetics, phonology, morphology, syntax, semantics, pragmatics, psycholinguistics, and sociolinguistics. This course places emphasis on the multicultural and multilinguistic differences in the analysis and application of linguistic theory.

Economics, Accounting, and Business Administration

Chair: Orhan Kayaalp (Carman Hall, Room 377)

Faculty Adviser: Linda Tauber (Carman Hall, Room 370)

Department Faculty: Professors: John Cirace, Oscar Fisch, Orhan Kayaalp, Chanoch Shreiber; Assistant Professors: Jaspal Chatha, Amod Choudhary, Juan Delacruz, Judith Fields, Vassilios Gargalas, Mario Gonzalez-Corzo, Susan Honig, Dene Hurley, Michelle Kamen-Friedman, Valerie Larifla; Lecturers: Peter Alexanderson, Kuk-Soo Chung, Emine Kayaalp, Anthony Murrell, Ada Rodriguez, Marshall Ross, Sekhem Sembenu, William Swenson, Linda Tauber

The Department offers a Master of Science Program in Accounting, designed for students who wish to become professional accountants with Certified Public Accountant (C.P.A.) credentials. The M.S./C.P.A. program is registered with the New York State Education Department.

M.S. PROGRAM IN ACCOUNTING

Students can earn a Master of Science Degree in Accounting, whether or not their undergraduate degree is in this field. Those with a B.S. in Accounting from Lehman College or an equivalent undergraduate accounting degree can earn a Master of Science degree by completing a total of 30 graduate credits. Students holding undergraduate degrees in fields other than Accounting or Accounting degrees not equivalent to Lehman's B.S. in Accounting degree may have to take up to 60 credits in Accounting and Business, in addition to the 30-credit master's program. A Master of Science Program in Business with a specialization in finance, marketing, or human resource management.

Students who complete this program and earn their Master of Science degree in Accounting will have completed all of the educational requirements for taking the C.P.A. examination in New York State.

Admission Requirements

To be admitted to the M.S. degree program in Accounting, applicants must complete (or have completed) Lehman's B.S. in Accounting program or its equivalent. An equivalent undergraduate degree must include 30 credits in accounting, including advanced accounting, cost accounting, taxation, and auditing, as well as the following:

6 credits in Business Law

6 credits in Economics

6 credits in Finance

3 credits in Statistics

3 credits in Quantitative Methods

3 credits in Computer Science

3 credits of electives in Accounting or Business

Students must also

- Take and obtain a satisfactory score on the Graduate Management Aptitude Test (G.M.A.T.); and
- Submit a statement of career objectives, two letters of recommendation, and if conditionally admitted, satisfy the conditions within one year.

Admission Requirements for Nonmatriculants Who Wish to Take Graduate Courses in Accounting

Students who do not wish to enroll in the degree program, but want to take graduate courses in Accounting, must:

- Hold a bachelor's degree (or its equivalent) from an accredited college or university;
- Have earned a minimum undergraduate average of B-;
- Take and obtain a satisfactory score on the Graduate Management Aptitude Test (G.M.A.T.);

- Obtain the approval of the Graduate Adviser; and
- Submit a statement of career objective and two letters of recommendation.

Degree Requirements

Core Courses. Students are required to take the following eight courses (all 3-credit): ACC 709, 719, 750, 790 and MSB 701, 702, 703, 710.

Elective Courses. Students are required to take two elective courses from the following list of 3-credit courses: ACC 724, 751, 785 and/or MSB 711, 712, 733, 741.

M.S. PROGRAM IN BUSINESS WITH SPECIALIZATIONS IN FINANCE, MARKETING, OR HUMAN RESOURCE MANAGEMENT

The course requirements of the 30-credit M.S. Degree in Business are as follows:

12 CREDITS IN CORE COURSES

3 credits MSB 700: Organizational Behavior

3 credits MSB 701: Quantitative Analysis for Managers

3 credits MSB 702: Economic Analysis for Managers

3 credits MSB 703: Computer-Based Information Systems for Managers

12 CREDITS IN MAJOR FIELD

Four courses in one of three areas of specialization:

a. Finance:

3 credits MSB 710: Investment Analysis

3 credits MSB 711: Capital Budgeting

3 credits MSB 712: Financial Statements Analysis

3 credits MSB 713: International Financial Management

b. Marketing:

3 credits MSB 720: Managing in a Global Environment

3 credits MSB 721: Applied Marketing Research

3 credits MSB 722: International Marketing Management: Culture, Law, and Politics

3 credits MSB 723: Contemporary Issues in Marketing

c. Human Resource Management:

3 credits MSB 730: Human Resource Management

3 credits MSB 731: Employee Training and Development

3 credits MSB 732: Managing Group and Interpersonal Dynamics

3 credits MSB 733: Labor Economics

6 CREDITS IN CAPSTONE SEMINARS

3 credits MSB 795: Seminar in Strategic Management

3 credits MSB 796: Seminar in Ethical Issues in Management

COURSES IN ECONOMICS AND ACCOUNTING

ACC 709: Advanced Accounting Theory. 3 hours, 3 credits. The history and development of accounting theory. Topics include the objectives of financial statements; the fundamental concepts, conventions, and assumptions underlying financial statements; and the measurement, presentation, and disclosure of the elements of financial statements. Analysis of recent pronouncements of the Financial Accounting Standards Board and its predecessors, the Accounting Principles Board, and the Committee on Accounting Procedures. Students will acquire an understanding of the principles used to evaluate current accounting practices and procedures. Students will be required to present reports on journal articles as preparation for the required thesis/special project to be completed in ACC 790. PREREQ: ACC 342.

ACC 719: Advanced Auditing. 3 hours, 3 credits. A study of auditing standards that will enable the student to relate the conceptual aspects to the procedural aspects of auditing and to understand its philosophy and environment. Explores the growing use of statistical sampling in auditing, as well as the impact of computers on the audit process. Emphasizes auditing problems encountered in computer-based systems, including the evaluation of internal controls, the evaluation of records produced by the system, and the use of the computer as an auditing tool. Written reports, including the Audit Report, are required. Special attention to reportable events and their resolutions with emphasis on professional ethics and responsibilities. PREREQ: ACC 441.

ACC 724: Accounting for the S.E.C. 3 hours, 3 credits. A detailed analysis and study of the requirements of the S.E.C. with regard to registration forms, reports, opinions, and ethics. Study of S.E.C. Accounting Series Releases, rulings, and decisions. PREREQ: ACC 719.

ACC 750: Advanced Taxation. 3 hours, 3 credits. The relationship between taxation and the formulation of business decisions and financial policies, with emphasis on problems resulting from the imposition of Federal income taxes on business. Gross income, deductions, and capital gains are the key areas covered. Limited attention is given to the effect of Federal income taxation of the individual. The course is broadly gauged, problem-oriented, and conceptual in approach. PREREQ: ACC 442.

ACC 751: Estate and Gift Taxation. 3 hours, 3 credits. A detailed study of the Federal and New York State estate and gift tax laws. Application of tax principles in planning and the preparation of returns will be included. PREREQ: ACC 442.

ACC 785: Independent Graduate Study in Accounting. 3 hours, 3 credits. Individual study and research on special topics in accounting, in consultation with a faculty member. PREREQ: To be determined by a supervising faculty member.

ACC 790: Graduate Seminar in Accounting. 3 hours, 3 credits. Readings and research culminating in the writing of a thesis/special report based on independent research. With faculty assistance, the student will select an accounting topic, present the results of his or her research to the class, and apply that research to an original topic. PREREQ: ACC 710.

COURSES IN BUSINESS

MSB 700: Organizational Behavior. 3 hours, 3 credits. Study of human behavior in organizational settings; the interface between human behavior and the organization; structures and processes characteristic of organizations themselves; and ethical issues emerging in the management of human resources.

MSB 701: Quantitative Analysis for Managers. 3 hours, 3 credits. A survey of modern statistical concepts and quantitative methods as applied to business research and decision making. Statistical techniques covered include descriptive data analysis, probability distributions, correlation analysis, and regression analysis. Applied methods include linear programming and decision-making models. The objective is to prepare the student to analyze busi-

ness data and to understand the statistical analyses encountered in business.

MSB 702: Economic Analysis for Managers. 3 hours, 3 credits. After a review of the basic microeconomic market structures, the course examines specific problems faced by the firm. These include managerial decisions regarding economic forecasting, analysis of return, risk and uncertainty, and allocation of resources for production.

MSB 703: Computer-Based Information Systems for Managers. 3 hours, 3 credits. This course explores the impact of computers on the scope and operation of business information systems. Topics include the technology, design, and implementation of computer-based systems and the role of systems design in improving the management process.

MSB 705: Financial Management. 3 hours, 3 credits. Techniques available for making financial decisions, with emphasis on those that deal with long-term investment projects. Specific topical coverage includes time valuation of money, value of assets, capital budgeting techniques, cost of capital and capital structure, dividend policy, and share value.

MSB 710: Investment Analysis. 3 hours, 3 credits. Principles involved in measuring and evaluating risk in various debt and equity instruments, with emphasis on security valuation. Specific topics include time valuation of money, value of assets, capital budgeting techniques, cost of capital and capital structure, dividend policy, and share value.

MSB 711: Capital Budgeting. 3 hours, 3 credits. Capital assets planning and evaluation. Topics covered include relevant cost concepts for decision making, present value theory and analysis, the theory and measurement of rate of return and cost of capital, and an introduction to capital rationing and probability theory. Specific cases are used to illustrate the practical aspects of each of the areas covered. Related problems, such as leasing, pricing, and debt refunding, are also introduced.

MSB 712: Financial Statements Analysis. 3 hours, 3 credits. Review of general principles governing the construction of financial statements; asset valuation, income determination and consolidated financial statements; characteristics of financial statements related to an understanding of analytical methods, including working capital, the statement of changes in financial position, and cash flow statements; examination of techniques used in analyzing solvency and the quality of earnings; forecasting techniques and implications; and impact of price level changes on financial statements and methods of financial statement analysis.

MSB 713: International Financial Management. 3 hours, 3 credits. The nature and purposes of financial management in the international context sources of international investment and financing and strategies to procure and employ these resources; the role of exposure to exchange rate and international interest rate risks; use of banks and financial markets such as Eurobond and currency option markets; and relevant techniques, such as currency swaps, lease financing, and hybrid bond structure.

MSB 720: Managing in a Global Environment. 3 hours, 3 credits. Management processes and practices applicable to international business operations—examination of managerial functions, such as planning, organizing, communicating, staffing, and motivating and controlling, with respect to the global parameters of the business environment.

MSB 721: Applied Marketing Research. 3 hours, 3 credits. Provides students with a complete understanding of the methods and techniques involved in marketing research. Students will become familiar with all stages of the market research process from initial problem definition through the presentation of final results.

MSB 722: International Marketing Management: Culture, Law, and Politics. 3 hours, 3 credits. Key concepts of international marketing; emerging marketing opportunities and threats; entry mode strategies of international marketing; global strategies for products, brands, pricing, distribution, logistics, and communication; policy framework for international trade; international trade finance and risk management; institutional infrastructure for export promotion; international marketing research, export procedures and documentation; and the World Trade Organization, and its implications on international marketing.

MSB 723: Contemporary Issues in Marketing. 3 hours, 3 credits. Procedures utilized in creating a commercially viable product market, from the initial needs analysis through marketing the product in local and international economy. The promotional process will be particularly emphasized, including its advertising, sales and trade promotion, personal selling, and communication components.

MSB 730: Human Resource Management. 3 hours, 3 credits. Introduction to human resource management as a functional field of business administration. Topics include employment, placement, and human resource planning; training and development of an organization's human resources; compensation and benefits; management and labor relations; health, safety, and security; training in ethics and social responsibility; and human resource research.

MSB 731: Employee Training and Development. 3 hours, 3 credits. Advanced study of human resource management focusing on effective employee training and development. Topics include equal employment opportunity, recruiting, selection, training and development, compensation, and employee and labor relations.

MSB 732: Managing Group and Interpersonal Dynamics. 3 hours, 3 credits. Special techniques involved in human resources supervision in handling morale, discipline, communication, grievances, learning, and other phases of employee and labor relations.

MSB 733: Labor Economics. 3 hours, 3 credits. Problems and issues in labor economics: wages, hours, and working conditions; wage policy; and relation of labor organizations to management decisions and economic changes.

MSB 741: Operations Research. 3 hours, 3 credits. This course deals with the application of mathematics to decision-making problems. The mathematical and statistical techniques covered include linear programming, correlation, and probabilistic models. The objective is to enable the student to translate a verbal description problem into an equivalent mathematical model and define the value of the information derived from the model for practical purposes. Applications include inventory control and quality control problems. PREREQ: MSB 740.

MSB 768: Money and Banking. 3 hours, 3 credits. The instruments of the money and capital markets will be identified and discussed; the significance of fiscal and monetary policies and their effects on the money and capital markets, and the flow of funds will be analyzed.

MSB 795: Seminar in Strategic Management. 3 hours, 3 credits. Formulation and implementation of corporate strategy and the integration of these decisions in different functional areas. PREREQ: All the core courses and at least two courses in a major field must be completed before taking this seminar.

MSB 796: Seminar in Ethical Issues in Management. 3 hours, 3 credits. A multidisciplinary approach to the issues of ethical business practice-based on the examination of the role of business leadership in influencing society at large. Students will examine various experiences and participate in discussions regarding ethical dilemmas and day-to-day situations. Case studies are used to develop students' skills in situation analysis and conflict resolution. PREREQ: All the core courses and at least two courses in the major field must be completed before taking this seminar.

English

Chair: Terrence Cheng (Carman Hall, Room 302B)
Graduate Coordinator: Grace Russo Bullaro (Carman Hall, Room 390)

Department Faculty: Distinguished Professor: William Collins; Professors: Walter Blanco, Mario DiGangi, Anne Humpherys, Gerhard Joseph, Mary Papazian, Sondra Perl, Mardi Valgema, Scott Westrem; Associate Professors: James Anderson, Nathalie Bailey, Grace Russo Bullaro, Terrence Cheng, Patricia Cockram, Earl Fendelman, Michael R. Paull, Jessica Yood; Assistant Professors: Daniel Bautista, Clement Dunbar, William G. Fisher, Paula Lascocco, Janis Massa, Margot Mifflin, Tyler Schmidt; Lecturers: Marsham Castro, Robert Carling, Deidre O'Boy

The M.A. program in English serves those who wish to expand their understanding of literature or composition, those who wish to prepare themselves for teaching English on the secondary or two-year college level, and those who wish to proceed to the doctorate. Students may choose concentrations in literature or in composition studies.

All students are eligible to take all courses (with whatever prerequisites may be listed). Most courses are "studies in" particular themes, genres, historical periods, or critical approaches; topics may vary and are announced during the preceding semester, and students may elect the same course twice if the topic is different. All courses must be on the 700 level unless the Program Coordinator permits a 600-level course to be counted toward the number of courses in English required for the degree. Students wishing to count a 600-level course must submit work written in the course for evaluation by the English Department Graduate Committee. All work for the degree must be completed within four years of matriculation.

Before their first registration, all students are required to plan complete programs with the Program Coordinator, who must approve all courses prior to registration.

Students who have done their major work in English in non-English-speaking countries may be required to offer evidence of having completed additional undergraduate English courses taken in a North American college or university before admission to the graduate program; these may be taken at Lehman College. Such students will be required to attain a score of at least 600 on the T.O.E.F.L.; candidates with scores of between 580 and 600 may be considered for admission provided they first attend a language institute or otherwise remedy their deficiencies.

Additional information regarding all aspects of the M.A. program in English may be obtained from the Program Coordinator.

MASTER OF ARTS PROGRAM IN ENGLISH

Admission Requirements

- Bachelor's degree (or its equivalent) from an accredited college or university.
- Demonstration of the potential to successfully pursue graduate study—that is, attainment of a minimum undergraduate Grade Point Average of 3.0 in the undergraduate record as a whole and 3.0 in English.
- Study of a minimum of 18 credits in courses beyond the introductory level in major literatures in English.
- Submission of three letters of recommendation, at least two of which must be from a person who can testify to the candidate's ability as a student of literature or composition (as appropriate).
- Submission of a personal statement of some 500 words indicating as precisely as possible the applicant's preparation for master's work and career plans. Students are encouraged to supplement this statement with a sample of undergraduate writing.
- Submission of a writing sample, not to exceed 30 pages.

Degree Requirements

After planning his or her program in advance with the Program Coordinator, the student must complete a minimum of 30 credits in English with an average of B or better. In the literature concentration, 24 credits must be in literature (including ENG 700 and 780). In the concentration in composition studies, 18 of the credits must be in the theory and practice of composition (including ENG 780, 784, and 785) and 6-9 in literature (including ENG 700). With permission from the Program Coordinator, a student may substitute 3 credits on the graduate level in other appropriate departments for 3 credits in literature. The requirements may be summarized as follows:

A. Concentration in Literature

Credits	Courses
6	ENG 700 and 780
18	Courses in literature
6	Elective courses in English

B. Concentration in Composition Studies

Credits	Courses
9	ENG 780, 784, and 785
12	Additional courses in theory and practice of composition chosen from the following: ENG 701 or ENG 702 (when topic is appropriate), 783, 787, 788, 790, 791, 792, and 795
6	Courses in literature (to include ENG 700)
3	Elective course in English or another appropriate department

Foreign Language. The foreign language requirement emphasizes the relationship between the knowledge of foreign languages and the study of literature. As far as possible, students should choose a language relevant to their M.A. thesis and/or to their future professional plans. The requirement may be satisfied by 1) demonstrating the ability to translate lucidly, with a dictionary, a passage from a modern critical text; or by 2) earning a B or better in coursework within the past five years in a) an intensive language-for-reading course offered through the Language Reading Program at the CUNY Graduate Center or b) an advanced undergraduate course in literature read in the foreign language. NOTE: The following languages are automatically accepted for meeting this requirement: Arabic, Bengali, Chinese, French, German, Greek, Hebrew, Hindi, Italian, Japanese, Kiswahili, Latin, Russian, Spanish, Urdu, and Yoruba. Students wishing to choose another language must apply to the Department's Graduate Committee for approval.

Comprehensive Examination. Candidates must pass a written comprehensive examination.

Thesis. The candidate must submit a satisfactory master's thesis prepared in conjunction with the course in Thesis Research (ENG 780). Two copies approved by the faculty director and the receipt for the binding fee are to be filed with the Program Coordinator.

RELATION TO THE CUNY PH.D. PROGRAM

The first 30 graduate credits in English in the Literature Sequence of the M.A. in English at Lehman College may be counted toward the Ph.D. in English literature in the City University. The University doctoral program in English is described in the Bulletin of The Graduate School of The City University of New York. Candidates who expect to proceed to the Ph.D. in the City University should apply for admission directly to the Ph.D.

program instead of to Lehman College. Inquiries may be addressed to the Executive Officer of the Ph.D. Program, Department of English, City University of New York, 365 Fifth Avenue, New York, NY 10016.

COURSES IN ENGLISH

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

ENG 700: Introduction to Literary Research. 3 hours, 3 credits. Introduction to methods of research, bibliography, and evaluation of various critical approaches. Pre- or corequisite for all graduate courses in literature, unless exempted by the Graduate Coordinator; to be taken at the start of graduate work.

***ENG 701: History of the English Language.** 3 hours, 3 credits. Historical linguistics and the study of English, including analysis of selected texts from Old English through early modern English to illustrate the development of the English language. Attention will be paid to the phonology and grammar of the English language and their changes during the period, as well as the ways language is used for expressive ends in the selected literary examples.

ENG 702: Structure of Modern English. 3 hours, 3 credits. Grammatical theory and linguistic descriptions of modern English (such as traditional, descriptive, and transformational grammars), with an emphasis on the formal properties of grammar and the formal characterization of language. Samples of modern English to be studied will be drawn from literary works from the early modern English period to the present.

***ENG 703: Studies in Old English Language and Literature.** 3 hours, 3 credits. (No previous knowledge of Old English required. May be repeated once for credit with a change in subject matter and permission of the Graduate Coordinator.) Intensive study of Old English, combined with reading of Beowulf and selected Old English prose and poetry in the original language.

ENG 705: Studies in Chaucer. 3 hours, 3 credits. (May be repeated once for credit with a change in subject matter and permission of the graduate coordinator.) Readings in *The Canterbury Tales* and other works. PREREQ: A course in the history of the language, Old English or Middle English, or an undergraduate course in Chaucer.

***ENG 707: Studies in Medieval Language and Literature.** 3 hours, 3 credits. (May be repeated once for credit with a change in subject matter and permission of the Graduate Coordinator.) Study of the linguistic structure and dialects of Middle English and development of the language in relation to Old English; study of selected texts of medieval literature in England from the beginnings to the close of the fifteenth century.

ENG 712: Studies in English Renaissance Literature. 3 hours, 3 credits. (May be repeated once for credit with a change in subject matter and permission of the Graduate Coordinator.) The Renaissance in England from the beginnings to the death of Queen Elizabeth.

ENG 713: Studies in Shakespeare. 3 hours, 3 credits. (May be repeated once for credit with a change in subject matter and permission of the Graduate Coordinator.) Detailed study of selected works, with specific consideration of a variety of critical techniques and approaches.

ENG 722: Studies in Milton. 3 hours, 3 credits. (May be repeated once for credit with a change in subject matter and permission of the Graduate Coordinator.) Study of the development of the poet, with attention paid to related prose works.

ENG 724: Studies in Seventeenth-Century Literature Exclusive of Milton. 3 hours, 3 credits. (May be repeated once for credit with a change in subject matter and permission of the Graduate Coordinator.) Study of such major figures in prose and poetry as Jonson, Donne, Herbert, Crashaw, Herrick, Marvell, Vaughan, Traherne, Dryden, Bacon, Browne, Burton, Bunyan, Hobbes, and Locke.

***ENG 731: Studies in Eighteenth-Century Literature.** 3 hours, 3 credits. (May be repeated once for credit with a change in subject matter and permission of the Graduate Coordinator.) Readings and analysis of major works by writers such as Swift, Defoe, Pope, Addison and Steele, Gay, Gray, Johnson, Richardson, Fielding, Smollett, Sterne, Wycherley, Vanbrugh, Farquhar, Sheridan, Congreve, and Goldsmith; consideration of minor writers of the century, including the circle of Dr. Johnson; study of the growth of pre-Romanticism.

ENG 740: Studies in Nineteenth-Century Literature. 3 hours, 3 credits. (May be repeated once for credit with a change in subject matter and permission of the graduate coordinator.) Study of the major tendencies of the century in Britain, with some consideration of related Continental writers. Critical analysis of such writers as Coleridge, Wordsworth, Keats, Shelley, Byron, Lamb, DeQuincey, Arnold, Tennyson, Browning, Carlyle, Ruskin, George Eliot, Dickens, Morris, and Meredith.

ENG 748: Studies in American Literature. 3 hours, 3 credits. (May be repeated once for credit with a change in subject matter and permission of the Graduate Coordinator.) Study of major writers in American literature from 1607 to the present. Topics may vary from semester to semester.

ENG 755: Studies in Twentieth-Century Literature. 3 hours, 3 credits. (May be repeated once for credit with a change in subject matter and permission of the Graduate Coordinator.) Study of major writers in English and of related Continental writers from 1890 to the present.

***ENG 760: Studies in Literatures of the Anglophone World.** 3 hours, 3 credits. (May be repeated once for credit with a change in topic and permission of the Graduate Coordinator.) Critical analysis of texts by writers from such regions of the world as India, Africa, and the Caribbean.

ENG 769: Studies in Drama. 3 hours, 3 credits. (May be repeated once for credit with a change in subject matter and permission of the Graduate Coordinator.) Analysis of selected plays by Continental, British, or American writers.

ENG 770: Studies in Poetry. Each 3 hours, 3 credits. (May be repeated once for credit with a change in subject matter and permission of the Graduate Coordinator.) Close analysis of theme and structure in selected poems.

ENG 771: Studies in Prose Fiction. 3 hours, 3 credits. (May be repeated once for credit with a change in subject matter and permission of the Graduate Coordinator.) Analysis of major tendencies and techniques in selected novels.

ENG 773: Feminist Studies in Literature. 3 hours, 3 credits. (May be repeated once for credit with change of topic and permission of the Graduate Coordinator.) Writing by and about women examined from major critical and theoretical perspectives. Topics will vary from semester to semester. PREREQ: ENG 700, 793, or permission of the instructor.

ENG 776: Special Studies in Literature and Language. 3 hours, 3 credits. (May be repeated once for credit with a change in topic and permission of the Graduate Coordinator.)

ENG 780: Thesis Research. 1 semester, 3 credits. (Required of all M.A. candidates in English. Tutorial hours to be arranged.) Preparation of the M.A. thesis under the guidance of a faculty director. PREREQ: ENG 700 and approval of the Program Coordinator.

ENG 782: Independent Study or Guided Reading. 3 hours, 3 credits. (May be repeated once for credit with a change in subject matter and permission of the Graduate Coordinator.) Independent study under the guidance of a faculty director in an area other than that of the thesis. PREREQ: Permission of the Graduate Coordinator.

ENG 783: Practicum in Teaching College Writing. 3 hours, 3 credits. Group and individualized instruction and practice, under the guidance of a member of the Lehman College English faculty, of the teaching of first-year writing courses at different levels. Attention is given to designing curricula for composition, constructing writing assignments, conducting classroom discussion of writing, responding to students' writing, and conducting informal classroom research. PREREQ: Approval of the Graduate Coordinator.

ENG 784: Readings in the Teaching of Writing. 3 hours, 3 credits. Group and individualized instruction, under the guidance of a member of the Lehman College English faculty, of important theoretical and observational writings on the teaching of composition at different levels. Readings in rhetoric, linguistics, and psycholinguistics, and in the history and sociology of the teaching of writing.

ENG 785: Seminar in Writing: Practice and Theory. 3 hours, 3 credits. A course to help teachers from grade school through college learn to teach writing by engaging in writing themselves. The course will also involve theoretical discussion of writing strategies, problems, and assignments. Specific emphasis may vary according to the students' needs.

ENG 787: Research in Composition Studies. 3 hours, 3 credits. This course reviews current research on writing and helps participants learn to design, conduct, evaluate, and write up the results of their own research projects. Attention will be given to issues faced during "qualitative" research and to questions faced during attempts to document the value of various practices in literacy instruction. Topics will vary from semester to semester. PREREQ: ENG 784 and 785.

***ENG 788: Studies in the Composing Process.** 3 hours, 3 credits. This course will review major studies of the composing process undertaken to date and will develop methods of analyzing it as students gain insight into the sources of their own writing. Students will be expected to produce a case study on the composing process by the end of the course. PREREQ: ENG 785 and/or permission of the instructor.

ENG 790: Stylistics. 3 hours, 3 credits. Practice in the stylistic analysis of a wide range of prose works, fiction and nonfiction, by writers in English. PREREQ: Permission of instructor.

ENG 791: Creative Writing I. 3 hours, 3 credits. Students will examine and practice forms of poetry, drama, and fiction in order to acquire a fundamental understanding of these forms. PREREQ: Permission of the instructor.

***ENG 792: Creative Writing II.** 3 hours, 3 credits. Advanced study and practice of poetry, drama, or fiction. For students wishing to study one of these forms intensively. PREREQ: ENG 791 or permission of the instructor.

***ENG 793: Studies in Literary Criticism.** 3 hours, 3 credits. Literary theory as explored by major critics: the nature of tragedy and comedy; questions of style and content; and the literary work in relation to artist, art, and audience.

ENG 794: Contemporary Literary Theory and Its Background. 3 hours, 3 credits. Discussion of links among New Critical, reader-response, semiotic and structuralist, deconstructionist, psychoanalytic, neo-Marxist, and feminist approaches to literature; relationships between nineteenth- and earlier twentieth-century seminal thinkers and their followers.

***ENG 795: Current Rhetorical Theory and Its Antecedents.** 3 hours, 3 credits. Theorists, developments, and accomplishments in twentieth-century rhetoric, studied with attention to their classical, Renaissance, and nineteenth-century backgrounds.

***ENG 796: Writing for the Professions.** 3 hours, 3 credits. The writing of different kinds of documents (reports, memoranda, proposals, evaluations, field studies, and so on) appropriate to different disciplines and professions. In the design of assignments, attention will be given to the interests of individual members of the class.

NEW YORK CITY WRITING PROJECT

The following courses are designed for the New York City Writing Project, an affiliate of the National Writing Project, and are offered through the Institute for Literacy Studies. These courses in English are not intended to satisfy New York State teacher-education certification requirements. Summer session courses are generally offered on the Lehman campus; during the academic year, most New York City Writing Project courses are offered in schools. For more information, write or call Marcie Wolfe, Director, New York City Writing Project, Institute for Literacy Studies, Lehman College, Bronx, NY 10468 (718-960-8758).

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

ENG 682: Independent Study. 3 hours, 3 credits. (May be repeated once for credit, on a different topic.) This course offers an opportunity for individualized study of theory and research in composition. PREREQ: One year of study in courses offered by the Writing Project, and permission of the instructor and of the Graduate Program Coordinator in English.

ENG 684: Seminar in Writing: Theory. 3 hours, 3 credits. Participants examine and evaluate current research on composing and on the teaching of writing. In addition to completing and responding to reading assignments, participants attend presentations by invited guests. They take ENG 685 concurrently when the two are offered in the summer session, but may take the two courses successively during the academic year. PREREQ: Permission of the instructor. COREQ: ENG 685 when offered in the summer session.

ENG 685: Seminar in Writing: Practice. 3-4 hours, 3-4 credits. Students write and discuss their writing with groups of fellow students, developing their powers of expression and gaining confidence in themselves as writers. Strategies in writing, problems faced by writers, and the demands of various kinds of assignments are explored. Kinds of writing emphasized and approaches to the discussion of writing vary with the needs and interests of students. PREREQ: Permission of the instructor. COREQ: ENG 684 when offered in the summer session.

ENG 686: Special Studies in Language, Literature, and Writing. 3 hours, 3 credits. (May be repeated once for credit, with change in topic.) Study of research and theory about reading, writing, the spoken language, and literature. Specific topic announced in advance. PREREQ: ENG 684 or 685, or instructor's permission.

ENG 688: Writing and Learning. 3 hours, 3 credits. Through examination of different kinds of texts, through keeping notebooks and journals about their responses to those texts, and through discussion with classmates, students will explore a wide range of genres and emphases in discourse, and will consider how texts from varied disciplines may be read. Students will experience different approaches to the reading of the same text, will examine the differences in treatment of the same topic in different texts, how different texts depend for their effect on cross-references to other texts and to the culture of the world outside the text. PREREQ: ENG 684 or 685, or consent of the instructor.

Environmental, Geographic, and Geological Sciences

Department Chair: Heather Sloan (Gillet Hall, Room 301A)
Department Faculty: Professors: Irene Leung, Robert Troy; Associate Professors: Juliana Maantay, Heather Sloan; Assistant Professors: Sunil Bhaskaran, Yuri Gorokhovitch, Hari Pant; Senior College Laboratory Technician: Holly Porter-Morgan.

The Department of Environmental, Geographic, and Geological Sciences offers courses designed to meet the needs of students in the programs in Elementary Education and Secondary School Education, Social Studies (Geography), and Earth Science and General Science (Geology and Weather and Climate).

CERTIFICATE PROGRAM IN GEOGRAPHIC INFORMATION SCIENCE (GISc)

Geographic Information Science (GISc) is a fast-growing computer technology field involving mapping and analysis of spatial data. Geographic Information Systems (GIS) enable us to assess and manage existing conditions and also help predict future conditions, ranging from monitoring disease occurrences, to endangered species preservation, to managing water supplies, to tracking real estate values, to crime solving.

GIS is used today in fields as diverse as law enforcement, marketing, economic development, public health administration, environmental analysis, ecology, urban planning, real estate, government, education, geology, anthropology, and archaeology. GISc is an expanding field with good career opportunities, and GIS professionals are in high demand in many fields. People with GIS skills can also be more marketable as managers and analysts in their own fields. A Certificate in GISc can be advantageous by itself or in augmenting a bachelor's or associate's degree.

The Certificate in GISc consists of a sequence of 4 courses, equaling 14 credits, plus one 3-credit Geography elective course, for a total of 17 credits:

GEP 504: Basic Mapping: Applications and Analysis (3 credits);

GEP 505: Principles of Geographic Information Science (GISc) (3 credits);

GEP 605: Special Topics in GISc (4 credits);

GEP 690: Workshop in GISc Research (4 credits); and a Geography elective (3 credits).

COURSES IN GEOLOGY

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

GEO 501: Earth Processes. 5 hours (3, lecture; 2, lab), 4 credits. (Not open to students who have had an introductory course in physical or historical geology.) Earth evolution, internal and surface structures, global tectonics, physical processes, resources and global climate change, and its effect on the environment.

GEO 502: Earth History. 5 hours (3, lecture; 2, lab), 4 credits. The geological history of our changing earth. Hypothesis of its origin; major historical episodes as recorded in the rocks and their contained fossils; and evolution of life. PREREQ: GEO 501 (or equivalent).

GEO 503: Geologic Field Methods. 5 hours (2, lecture; 3, lab), 3 credits. Methods of geologic mapping. Classroom work and fieldwork. PREREQ: GEO 105 (or equivalent).

GEO 504: Fossils, Time, and Evolution. 4 hours (2, lecture; 2, lab), 3 credits. The morphology, preservation, and interpretation of key fossils. PREREQ: GEO 502 (or equivalent).

***GEO 505: Earth Materials I—Mineralogy.** 5 hours (2, lecture; 3, lab), 3 credits. The rock-forming and accessory minerals; other selected minerals. PREREQ: GEO 501 (or equivalent) plus one year of high school or college chemistry.

***GEO 506: Earth Materials II—Petrology.** 5 hours (2, lecture; 3, lab), 3 credits. The common igneous, sedimentary, and metamorphic rocks of the earth's crust. PREREQ: GEO 505.

***GEO 507: Earth Structures.** 5 hours (2, lecture; 3, lab), 3 credits. Large- and small-scale structures in the crust and their modes of origin. PREREQ: GEO 502 and plane geometry.

GEO 601: Earth Systems Science for Educators. 4 hours, 4 credits. Introduction to earth systems science from the perspectives of systems components' origin, evolution, structure, and composition; presentation of the dynamic processes that link them. The course is designed for science education students seeking New York State teaching certification in earth science, grades 7-12. It takes a standards-based, hands-on approach to presenting content and pedagogy in parallel. PREREQ: Students must be enrolled in the M.S.Ed. Science Education Program and/or be seeking New York State certification in earth science, grades 7-12.

GEO 603: Global Plate Dynamics. 5 hours (3, lecture; 2, lab), 4 credits. Plate tectonics as a unifying theory for the dynamic processes that connect the exterior and interior of the planet and shape its surface. Plate boundary characteristics, driving mechanisms, plate motion, relationships to climate and biodiversity, and global implications for the Earth system. Laboratories include geologic map study and techniques of measuring, plotting, and interpreting structural and plate motion data. PREREQ: GEO 501, 502, or 601.

GEO 605: Advanced Earth and Environmental Science with Geographic Information Systems (GIS). 6 hours (2, lecture; 4, lab), 4 credits. This course explores earth and environmental sciences using advanced GIS applications and concepts, including environmental modeling and spatial analysis of landslides, earthquakes, soil erosion, stream sedimentation, groundwater flow, ecosystem stability, global climate change, and other earth processes. PREREQ: GEP 505 or equivalent, or Departmental permission.

GEO 697: Independent Study in Geology. 1-3 hours, 3 credits. Independent study of selected topics in geology under the guidance of a faculty member. PREREQ: Permission of the Graduate Advisor.

COURSES IN HUMAN GEOGRAPHY

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

***GEH 501: Principles of Geography.** 3 hours, 3 credits. (Not open to students who have had an introductory course in principles of geography.) Distribution and characteristics of the elements of the natural and cultural environment and analysis of their interrelationships. NOTE: GEH 501 is required of students in the Secondary School Social Studies Curriculum, unless they have had an introductory course in principles of geography.

GEH 502: World Regional Geography. 3 hours, 3 credits. Study of each of the world's major regions, characteristics of homogeneity, and attributes of each region, including physical environment, population, culture, agriculture, economic development, urbanization, and political geography.

***GEH 611: Geographic Interpretation of World Affairs.** 3 hours, 3 credits. Analysis of the geographic influences of the world's political, social, and economic problems. PREREQ: GEH 501 (or equivalent).

***GEH 612: Geographic Basis of World Trade.** 3 hours, 3 credits. Study of world transportation and communication, the interdependence of geographic regions, and the geographic factors influencing international trade. PREREQ: GEH 614 (or equivalent).

GEH 613: Conservation of Natural Resources. 3 hours, 3 credits. The physical and human resources of the world and the needs and methods for their conservation. PREREQ: GEH 501 (or equivalent).

*GEH 614: **Economic Geography.** 4 hours, 4 credits. Geographic analysis of the major economic activities of the world. PREREQ: GEH 501 (or equivalent).

*GEH 621-626: **Geography of Major Regions.** Each 3 hours, 3 credits. Each of the following courses, dealing with a continent or a large subdivision thereof, presents an analysis of the major features of the natural and cultural environment of the entire region, followed by an intensive study of the geographic regions within it. PREREQ: GEH 501 (or equivalent).

GEH 621: The Geography of the U.S. and Canada. 3 hours, 3 credits. An introduction to the physical geography, natural resources, population and urban distribution, cultural patterns, and economic geography of the U.S. and Canada. Attention given to changes being brought about by the North American Free Trade Act.

GEH 622: The Geography of Latin America. 3 hours, 3 credits. An introduction to the physical geography and natural resources, population and urban distribution, cultural patterns, and economic geography of Latin America.

GEH 624: The Geography of Asia. 3 hours, 3 credits. An introduction to the physical geography and natural resources, population and urban distribution, cultural patterns, and economic geography of Asia.

GEH 625: The Geography of Western Europe. 3 hours, 3 credits. An introduction to the physical geography and natural resources, population and urban distribution, cultural patterns, and economic geography of Western Europe.

GEH 626: The Geography of Eastern Europe and the Former Soviet States. 3 hours, 3 credits. An introduction to the physical geography and natural resources, population and urban distribution, cultural patterns, and economic geography of Eastern Europe and the former Soviet States.

GEH 630: Geography of the New York Metropolitan Area. 3 hours, 3 credits. The location, terrain, harbor, climate, and other aspects of the geographic base on which the New York metropolitan area has developed. Relationship of these factors to the genesis, growth, spatial characteristics, and problems of human occupancy. PREREQ: GEH 501 (or equivalent).

COURSES IN PHYSICAL GEOGRAPHY

GEH 501: Weather and Climate. 4 hours (2, lecture; 2, lab), 3 credits. Study of atmospheric phenomena and weather instruments and a general introduction to meteorological processes. Description and explanatory analysis of the climates of the earth.

GEH 504: Basic Mapping Applications and Analysis. 4 hours (2, lecture; 2, lab), 3 credits. This course provides a focus on mapping: how to use maps to obtain information about a wide variety of topics and how to create maps to display and analyze both quantitative and qualitative data. Discussions include mental maps, aerial photos, remotely sensed images, computer-assisted cartography, and Geographical Information Systems (GIS). Laboratory work includes digital map applications and GIS mapping exercises. PREREQ: None.

GEH 505: Principles of Geographic Information Science. 4 hours (2, lecture; 2, lab), 3 credits. The use of Geographic Information Systems in the teaching of social, earth, and life sciences. Demographic studies and graphic presentation of demographic analyses. The use of modern mapping techniques in studies of the Earth Environment. PREREQ: GEO 501 or GEH 501 or Departmental permission.

GEH 530: Urban Environmental Management. 3 hours, 3 credits. Review of issues and problem-solving techniques for critical environmental concerns in the urban habitat, covering the key elements of urban environmental infrastructure, pollution and its effects on human health, environmental planning and policymaking, and the regulatory framework of environmental protection.

GEH 602: Biogeography and GISc. 5 hours (3, lecture; 2, lab), 4 credits. The methods and techniques used to examine the past and current distribution of organisms, in the context of geophysical, evolutionary, and ecological processes. Study of the geographic ranges of living organisms and discussion of numerous relevant topics. Lab work will provide students with hands-on experience using GISc to explore such concepts as species distribution, island biogeography, and community fragmentation.

GEH 605: Special Topics in Geographic Information Systems. 6 hours (2, lecture; 4, lab), 4 credits. May be reelected when topic changes, for a maximum of 8 credits. Use of Geographic Information Systems for conducting research and spatial analyses in the natural and social sciences. The advanced use of computer mapping and spatial analysis technologies for studying the physical and human components of the earth's environment. PREREQ: GEH 505 or Departmental permission.

GEH 620: Demography and Population Geography with GISc. 4 hours (2, lecture; 2, lab), 3 credits. The world's population in the context of geography and demography. The theoretical framework, defined by the fields of population geography and demography, will be studied and explored qualitatively and quantitatively. Data sources and acquisition, population metrics (growth, change distribution, and composition), population and food supply, mortality, fertility, and migration. Lab work will provide students with hands-on experience using GISc to explore demographic concepts.

GEH 621: Principles and Applications in Remote Sensing. 6 hours (2, lecture; 4, lab), 4 credits. In this course, students will learn the fundamental concepts and principles of electromagnetic theory in remote sensing, becoming familiar with the characteristics, capabilities, and limitations of past, current, and planned future remote sensing systems, and develop practical skills in interpreting aerial photographs, satellite optical remote sensing data, and thermal and radar imagery. Students will also be exposed to a wide variety of applications in environmental mapping and monitoring, natural resources management, urban and regional planning, and global change research. Weekly assignments will be provided to develop skills in interpreting different types of images. A term project will be required to make use of remotely sensed data and digital image processing capabilities in one particular area of application.

GEH 632: Environmental Health and Geographic Information Sciences (GISc). 4 hours, 3 credits (2, hours, lecture; 2, hours lab) Exploration of the field of environmental health, with special emphasis on spatial factors, medical geography, and the use of Geographic Information Science (GISc) to analyze relevant relationships between environmental impacts, diseases, demographics, socio-economic conditions, and the implications on public health and policy. Lab work uses GISc to examine and analyze environmental health, population, and natural and built environmental data for planning and research. PREREQ: None.

GEH 690: Workshop in Geographic Information Science (GISc) Research. 3 or 4 hours, 3 or 4 credits (course may be repeated for a total of 8 credits). An advanced examination of mapping and of new computer-aided technologies in the natural and social sciences, including research design and methodology and designing and conducting an independent GIS research project, conforming to generally acceptable professional geographical practices and techniques, under the supervision of faculty. PREREQ: GEH 605 or Departmental permission.

Health Sciences

Chair: Andrea P. Boyar (Gillet Hall, Room 431)

Advisers: Craig Demmer, Health Education and Promotion (Gillet Hall, Room 334); Andrea Boyar, Nutrition (Gillet Hall, Room 432); Jane Levitt, Public Health (Gillet Hall 415); Robin Kunstler, Recreation Education (APEX, Room 269)

Dietetic Internship Coordinator: Susan Tree (Gillet Hall, Room 417A)
Department Faculty: Professors: Marilyn Aguirre-Molina, Craig Demmer, Nicholas Galli, Robin Kunstler; Associate Professors: Luisa Borrell, Andrea Boyar, Cynthia K. Hosay, Jane Levitt, Barbara Menéndez, Cheryl Merzel, Raziye Gul Sonmez, Alice Tobias; Assistant Professors: Orazio Caroleo, Lalitha Samuel; Instructor: Althea Engle

The Department of Health Sciences offers five graduate degree programs: the M.S.Ed. Program, Health N-12 Teacher; the M.A. Program in Health Education and Promotion; the Master of Public Health Program; the M.S. Program in Nutrition; and the M.S.Ed. Program in Recreation Education.

M.S.ED. PROGRAM, HEALTH N-12 TEACHER

The purpose of the M.S.Ed. program is to prepare students for permanent New York State certification as health teachers.

Admission Requirements

- Bachelor's degree (or its equivalent) from an accredited college or university.
- Demonstrate the ability to successfully pursue graduate study by having attained a minimum grade average of B in the undergraduate record as a whole and an average of B in courses most relevant to the graduate discipline.
- Provisional certification as a health teacher or qualify for certification within three semesters of matriculation.
- Three letters of recommendation and a Personal Goal Statement.

Degree Requirements

The curriculum consists of 33 graduate credits and includes either a thesis or a comprehensive examination. Course and credit requirements are as follows:

- In required HEA courses (12 credits): HEA 600 (3)¹, 602 (3), 603 (3)¹, 620 (3)
- In HEA electives² (9)
- In linking courses (12): HEA 671 (3), 672 (3), 673 (3), 674 (3)

¹ Students who have previously taken this course (or its equivalent) may substitute a 3-credit HEA elective in its place.

² Students who write a thesis need to earn only 6 credits of HEA electives (HEA 691/692). Otherwise, students must take HEA elective courses totaling 9 credits and pass a comprehensive exam.

M.A. PROGRAM IN HEALTH EDUCATION AND PROMOTION

The purpose of the M.A. Program in Health Education and Promotion is to prepare students for positions as health educators within public and community agencies, business and industry, hospitals, and other types of clinical facilities. Satisfactory completion of program requirements enables students to become Certified Health Education Specialists (C.H.E.S.), awarded by the National Commission for Health Education Credentialing.

Primary consideration for admission into this graduate program will be given to qualified students who have an undergraduate degree in Health Education or another health-related discipline.

Qualified students with backgrounds in other areas are also eligible for admission.

Admission Requirements

- Bachelor's degree (or its equivalent) from an accredited college or university.
- Demonstrate the ability to successfully pursue graduate study by having attained a minimum grade average of B- in the undergraduate record as a whole and an average of B in courses most relevant to the graduate discipline.
- Three letters of recommendation and a Personal Goal Statement.
- If conditionally admitted, satisfy the conditions within three semesters.

Degree Requirements

- The curriculum consists of 33-34 graduate credits and includes either a thesis or a comprehensive examination. Course and credit requirements are as follows:
 - In required HEA courses (18): HEA 600 (3)¹, 602 (3), 603 (3)¹, 620 (3), 623 (3), 670 (3)¹ and one of the following: 671 (3), 672 (3), 673 (3), 674 (3).
 - In HEA electives² (15)

¹ Students who have previously taken this course (or its equivalent) may substitute a 3-credit HEA elective in its place.

² Students who write a thesis need to earn only 6 credits of HEA electives (HEA 691/692). Otherwise, students must take HEA elective courses totaling 9 credits and pass a comprehensive exam.

M.P.H. PROGRAM IN PUBLIC HEALTH

The Lehman College Master of Public Health (M.P.H.) Program prepares students for professional careers in the healthcare field as practitioners and researchers. Students will also be prepared to continue in graduate studies to pursue doctoral degrees. The M.P.H. Program has been designed to meet the standards for accreditation by the Council on Education for Public Health (C.E.P.H.). In addition to the competencies required in an M.P.H. Program, the Lehman College M.P.H. Program offers a specialization in community-based public health with a focus on health equity.

Admission Requirements

- Bachelor's degree in a health-related field from an accredited college or university, or a bachelor's degree with successful completion of relevant coursework.
- At least one year of work experience in public health or related work in the health field. Volunteer experience or internship may be considered in certain circumstances.
- Ability to successfully pursue graduate study by having attained a minimum grade average of B in the undergraduate record.
- Three letters of recommendation and a personal essay.
- Scores from the Aptitude Section of the Graduate Record Examination or proof of an earned master's degree from an accredited U.S. university.
- If submitting documents from institutions whose language of instruction is not English, an official translation and evaluation of the transcript and competency in English as demonstrated through T.O.E.F.L. scores of at least 550.

Degree Requirements

The curriculum consists of 46 graduate credits and includes core courses, an area of specialization, elective graduate courses, a supervised internship, a capstone seminar, and a capstone project. Course and credit requirements are as follows:

Core Courses (19 credits): All students are required to take the following courses and credits:

- PHE 600 Biostatistics in Public Health (3 cr.)
- PHE 606 Public Health Epidemiology (3 cr.)
- PHE 700 History and Philosophy of Public Health (3 cr.)
- PHE 701 Public Health Policy and Management (3 cr.)
- PHE 702 Environmental Health (4 cr.)
- PHE 703 Social and Behavioral Dimensions of Health (3 cr.)

Specialization (9 credits): All students are required to take the following courses and credits:

- PHE 709 Health Equity and Social Justice (3 cr.)
- PHE 710 Applications of Research Methods in Public Health (3 cr.)
- PHE 715 Public Health Program Planning and Evaluation (3 cr.)

Electives (9 credits): Graduate-level courses selected with the approval of the Graduate Adviser.

Internship (3 credits)

- PHE 770 Public Health Internship (180 hours)

Capstone Seminar (3 credits)

- PHE 790 Public Health Capstone Seminar. PREREQ: PHE 770

Capstone Project (3 credits)

- PHE 792 Public Health Capstone Project. PREREQ: PHE 790

M.S. PROGRAM IN NUTRITION

The Master of Science Program in Nutrition prepares students for a wide range of professional positions in either clinical or community nutrition, and for doctoral study in these fields. Graduates of the program may find career opportunities as clinical nutritionists within health-care settings and as nutrition educators in the community. Those graduating with Option II—Dietetic Internship are eligible to sit for the Registration Examination administered by the American Dietetic Association (A.D.A.) to become Registered Dietitians (R.D.).

Admission Requirements

- Bachelor's degree or its equivalent from an accredited college or university.
- Demonstrated ability to successfully pursue graduate study by having achieved a minimum grade average of B (3.0) in the undergraduate record as a whole and in courses most relevant to the graduate discipline.
- Two letters of recommendation.
- Must have completed the following courses and credits (or their equivalents):

In Basic Science: courses in physiology (BIO 181 and 182, or 228), inorganic chemistry (CHE 114 and 115), and organic chemistry (CHE 120 and 121).

In Nutrition: courses in introductory (HSD 240) and advanced nutrition (DFN 445), diet and disease (DFN 348 and 448), and foods (DFN 120 and 220). Deficiencies in undergraduate preparation may be rectified through Lehman's undergraduate program in Dietetics, Foods, and Nutrition, which is approved by the American Dietetic Association as a Didactic Program in Dietetics (D.P.D.).

Degree Requirements

Each candidate must complete an approved program of study of at least 38 credits that includes the general core courses and approved elective courses, which may include the courses required for the Dietetic Internship (D.I.) program. The student may elect either to write a thesis or pass a comprehensive examination for a minimum total of 38 credits.

Core Courses

All students are required to take the following courses and credits:

HEA 600 (3), HEA 620 (3), BIO 610 (4) or BIO 644 (4), DFN 610 (4), DFN 620 (3), DFN 641 (3), DFN 651 (3), and DFN 791 (3) (*total of 26 credits*).

Elective Courses: Students may select from the following courses and credits for a minimum of 12 credits:

DFN 621 (3), 630 (3-6), 661 (3), 692 (3-6), 693 (3-6), 730 (3), 731 (2-6), 741 (3), 771 (3), 792 (3), 793 (3), 794 (3-6), 795 (3-6), HSD 606, and other courses selected with permission of the Graduate Adviser (*total of a minimum of 12 credits*).

Admission Requirements to Dietetic Internship Program (D.I.)

Students who wish to enter the D.I. must be accepted into Lehman's M.S. in Nutrition Program and then submit an additional application to the D.I. Places in the D.I. are limited, and therefore admission into the D.I. is competitive. Students must conform to the admissions policies of the D.I. as itemized on the web pages of the D.I. Program (www.lehman.cuny.edu/deannss/healthsci/di/info.html), which includes the computerized matching program administered through "D & D Digital Systems."

Included in the D.I. application are:

- The A.D.A. internship application form;
- Two recommendations on A.D.A. forms;
- Undergraduate and/or graduate transcripts; and
- A D.P.D. Verification Statement attesting to the completion of A.D.A.-approved coursework equivalent to the undergraduate program in Dietetics, Foods, and Nutrition.

Applications must be submitted to the D.I. Coordinator by **February 15** for entry into the D.I. class beginning in the Fall semester.

Prior to enrolling in the supervised practice (DFN 730), each student must satisfy the completion of the following four graduate courses: DFN 610, 641, 651, and 661. Concurrent registration is permitted in one or more of the required courses by prior permission of the D.I. Director.

Completion Requirements for Dietetic Internship Program

- In order to sit for the R.D. examination, students must be admitted to the M.S. in Nutrition program; submit a separate application to the D.I.; participate in computer matching; be admitted into the D.I.; complete four prerequisite and/or corequisite courses; and complete a minimum of 900 hours of supervised fieldwork (DFN 730 for 3 semesters), and attend the fieldwork seminars (DFN 731) for 3 semesters or until the requirements are fulfilled. The D.I. must be completed within a 24-month period.
- A verification statement for completion of the D.I. will be granted following successful completion (with a mean G.P.A. of at least 3.0) of DFN 610 (4 credits), 641 (3), 651 (3), 661 (3), 730 (6), and 731 (6).
- Completion of the master's program is not required for completion of the Dietetic Internship option.

M.S.ED. PROGRAM IN RECREATION EDUCATION

The Master's Program in Recreation Education at Lehman College consists of a 33-credit Master of Science in Education degree, which is designed to prepare individuals for professional employment in the broad field of leisure services.

Admission Requirements

- Bachelor's degree (or its equivalent) from an accredited college or university.
- Demonstrate the ability to successfully pursue graduate study. (Above-average academic achievement in general is required.)
- Two letters of recommendation.
- If conditionally admitted, make up not more than 12 credits of specified undergraduate course work, starting in the first semester and finishing in no more than three consecutive semesters.

Departmental Retention Policy

Once admitted into one of the graduate programs, students must maintain a Grade Point Average of B. If a student's average falls below B, he or she will have one semester to bring the average up to the minimum standard. Failure to do so may result in dismissal from the program.

Degree Requirements

The curriculum for the M.S.Ed. Program in Recreation includes two options:

Option A: Recreation and Park Administration, which prepares individuals for supervisory and administrative roles in public, voluntary, and commercial recreation agencies.

Option B: Therapeutic Recreation Service, which prepares individuals to deliver therapeutic recreation services in hospitals, nursing homes, day-treatment programs, and other institutional and community settings. Students who complete this option have met the therapeutic recreation option requirements for certification as a Certified Therapeutic Recreation Specialist, administered by the National Council for Therapeutic Recreation Certification.

Students must complete at least 24 credits in recreation courses, 3 credits in HEA 600 or equivalent, and may complete their additional 6 credits in related areas, with the prior approval of the graduate adviser. A maximum of 12 credits may be transferred from other universities or colleges with the approval of the Graduate Adviser. Upon graduation, all students will have met the academic requirements for certification as a Certified Parks and Recreation Professional, administered by the National Recreation and ParkS Association.

Recreation Education Curriculum

Option A: Recreation and Park Administration (18 credits):

HEA 600 (3), REC 700 (3), 701 (3), 702 (3), 703 (3), 705 (3).

3 credits in Therapeutic Recreation: Select from REC 704, 707, 708, 709, 710, 711.

6 credits of administration electives: Select from REC 680, 706, 712, 715, 790.

6 credits related electives from courses in Health Sciences or Education

Option B: Therapeutic Recreation Service (18 credits):

HEA 600 (3), REC 700 (3), 701 (3), 702 (3), 703 (3), 704 (3).

9 credits in Therapeutic Recreation courses: Select from REC 680 (3), 707 (3), 708 (3), 709 (3), 710 (3), 711 (3), 712 (3), 790 (3). *At least 6 credits must be selected from 707-711.*

6 credits in related electives from courses in Health Sciences or Education.

NOTES: Students who have not had professional experience in Therapeutic Recreation or Community Recreation must take REC 715 as part of their option. Students must meet one of the following graduation requirements: (a) Pass a comprehensive exam or (b) Complete a thesis. Students who select the thesis option enroll in REC 781 and REC 791 in lieu of 6 credits of electives.

COURSES IN HEALTH EDUCATION

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

HEA 507: Human Sexuality. 3 hours, 3 credits. (Closed to students who have taken HEA 307 or equivalent.) Physiological, psychological, and social aspects of human sexual development and function.

HEA 509: Drugs and Substance Abuse. 3 hours, 3 credits. (Closed to students who have taken HEA 309 or equivalent.) Emphasis on physiological, psychological, and social effects of drug abuse.

HEA 600: Biostatistics. 3 hours, 3 credits. Statistical concepts, techniques, and applications of the analysis of health-related data, including the use of computer software to analyze and interpret data.

HEA 601: Curriculum Development in Health Education. 3 hours, 3 credits. Examination of significant health curriculum trends. Analysis of curriculum-reform movement in health, with emphasis on principles, policies, and procedures for curriculum construction.

HEA 602: Research Methods in Health Education. 3 hours, 3 credits. Study of the design, methods, and research tools used in health education. Formulation of a research problem. PREREQ: HEA 600 or equivalent.

HEA 603: History and Philosophy of Health Education and Promotion. 3 hours, 3 credits. Examination of the philosophical basis of health education and development of the health promotion movement in modern society. Analysis of the scientific, educational, sociological, psychological, anthropological, and legal basis of the profession with respect to its place in the health care system. Review of current professional developments.

HEA 604: Educational Strategies in Health. 3 hours, 3 credits. Overview of essential present-day knowledge of health practices and concepts. Emphasis on specific strategies for communicating health information and promoting health practices in a community setting.

HEA 609: Drug Problems in the School and Community. 3 hours, 3 credits. Planning, developing, and implementing a drug-prevention program in the school and community. PREREQ: HEA 509 (or equivalent) or Departmental permission.

***HEA 610: Group Dynamics in Health Education.** 3 hours, 3 credits. An introduction to the fundamental processes of group dynamics and analysis of specific group approaches as they relate to the health educator. Focus on group networking, decision-making patterns, and leadership. Exploration of methods and techniques of identifying problems and improving group function.

HEA 620: Health Counseling. 3 hours, 3 credits. Health problems of the school child, remedial procedures, and health-counseling techniques. PREREQ: Either a personal health, public health, or physical-inspection course (or equivalents), or Departmental permission. *NOTE: Students (in consultation with the instructor) will be expected to enter into a specific health-counseling situation in depth and follow it to fruition at the end of the semester.*

HEA 622: Organization and Administration of Health Education and Promotion Programs. 3 hours, 3 credits. Formulation of principles, policies, and procedures of health education and promotion programs within a variety of institutional settings; coordination with other health services, professional personnel, and cooperating agencies.

HEA 623: Program Planning and Evaluation in Health Education. 3 hours, 3 credits. Identification and analysis of health education and promotion program planning, implementation, and evaluation in various professional environments. Emphasis on the development of model programs.

HEA 624: Safety Education in Secondary Schools and Colleges. 3 hours, 3 credits. History and development of safety education. Analysis of safety factors related to home, school, transportation, and recreation facilities; curriculum material; methods; and organizational procedures. *NOTE: Students (in consultation with the instructor) will be expected to embark on a safety project within their own school situation and to set the framework of its solution.*

HEA 625 (FCS 674): Seminar in Human Sexuality. 3 hours, 3 credits. Analysis of current trends, problems, and issues. PREREQ: One course in human sexuality or sex education, or Departmental permission.

***HEA 626: Mental Health and the Classroom Teacher.** 3 hours, 3 credits. The scope of the mental health problem; implications for the classroom teacher. Methods of improvement and preservation of the well-being of individuals.

HEA 627: Health Problems and Issues in Contemporary Society. 3 hours, 3 credits. Identification and analysis of various community health problems and issues in contemporary society. Exploration of the impact on the individual, family, and society.

HEA 630: Community Organization and Health Education. 3 hours, 3 credits. Current approaches in community development and the community-organization process are related to the development and promotion of public health and health education. Emphasis on coordinated community action.

HEA 633: Seminar in Urban Health Problems. 3 hours, 3 credits. Health in the urban setting, including special problems or susceptibility in ethnic groups, innovative health education programs, and disease prevention.

HEA 634: Modern Advances in Health Science. 3 hours, 3 credits. Problems and current research in health education and community health education.

HEA 635: Seminar in Disease Prevention and Control. 3 hours, 3 credits. Examination and analysis of the major causes of morbidity and mortality in modern society. Review of epidemiological principles. Analysis of disease causation, with an emphasis on the role of education in disease prevention and control.

HEA 636: Perspectives on Death and Dying. 3 hours, 3 credits. Study of death, dying, and bereavement from psychological, social, and cultural perspectives. Topics including end of life care, the effects of different types of death on the grief process, children and bereavement, and grief counseling. Implications for health services delivery.

HEA (DFN) 640: Nutrition and Chronic Diseases. 3 hours, 3 credits. The relationship of diet to health promotion and disease prevention and management. Emphasis on current dietary patterns in the United States and other industrialized nations and the high incidence of degenerative diseases, such as arteriosclerosis, diabetes mellitus, diverticulosis, and cancer. PREREQ: BIO 181 and BIO 182 or equivalents and permission of the Department.

HEA 670: Field Experience in Health Education. 10 hours, 3 credits. Supervised field experience in an agency offering health education/health promotion programs. PREREQ: Completion of 15 graduate credits in health education.

HEA 671: Concepts of Wellness. 3 hours, 3 credits. Study of wellness and how to achieve a wellness lifestyle. Examines dimensions of wellness and sociocultural influences on health. Emphasis will be on educational strategies to promote wellness among diverse populations.

HEA 672: Promoting Health. 3 hours, 3 credits. Study of health promotion and how to promote personal and interpersonal health. Examines health issues across generations. Emphasis on educational strategies to promote health among various age groups.

HEA 673: Preventing Disease and Disability. 3 hours, 3 credits. Examines the etiology of health problems, risk factors for diseases and disabilities, and attitudes and issues relating to death and dying. Emphasis on educational strategies to identify and reduce risks for various health problems.

HEA 674: Environment and Protecting Health. 3 hours, 3 credits. Examines environmental health issues and problems. Emphasis on educational strategies to address environmental health problems.

HEA 680: Special Topics in Health. 3 hours, 3 credits. (May be reelected for credit when the topic changes.) Consideration of recent developments in the field of health, with special emphasis on interdisciplinary contributions. PREREQ: Graduate Adviser's permission.

HEA 685: Independent Study in Health Education and Promotion. One semester, 3 credits (may be repeated up to 6 credits). Readings in and examination of special topics in health education. PREREQ: Open only to matriculated students who have completed 24 credits in the major. PREREQ: Departmental permission.

HEA 690: Seminar in Current Research. 3 hours, 3 credits. Research topics are presented for class analysis and discussion. PREREQ: HEA 602 plus 12 hours of graduate work in Health Education.

HEA 691-692: Thesis. 6 credits (not open to students who have taken the comprehensive exam). Individual research under faculty supervision. Credit granted only upon completion and acceptance of thesis. A grade of INC will be assigned for the first semester. PREREQ: HEA 602.

HEA (EDG) 731: Sexuality Counseling. 3 hours, 3 credits. An overview of sexuality counseling. Stresses the process of interaction between professionals and clients that allows clients to explore and understand their sexuality, feelings, values, responsibilities, needs, and behaviors. Topics include: changing family structure, alternative lifestyles, changing sex roles, an increasing older population, drug and alcohol abuse, and sexually transmitted diseases, including AIDS. PREREQ: Permission of adviser.

HEA 741: Strategies in Nutrition Education. 3 hours, 3 credits. Examination of current methods and materials used in nutrition education, including individual counseling and group instruction. Emphasis is on development, use, and evaluation of appropriate teaching strategies and materials. (Includes workshops and fieldwork.) PREREQ: Departmental permission.

HSD 606: Epidemiology. 3 hours, 3 credits. Epidemiological principles and concepts are examined with respect to their application in measuring the distribution and determinants of disease. Research designs in experimental and observational epidemiologic studies aimed at identifying risk factors and disease etiology are evaluated and critiqued as well as the validity and reliability of screening programs. PREREQ: HEA 600 or equivalent.

HSD 608: Legal and Ethical Issues in Health Care. 3 hours, 3 credits. Identification and examination of legal issues related to providers and consumers of health care. Health issues are examined in light of legal doctrines within health care environments.

COURSES IN NUTRITION

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

DFN 610: Nutrition: An Integrated Approach. 4 hours, 4 credits. Discussion of nutrients on a cellular and organism level, emphasizing the biochemical and physiological aspects of nutrition. Cellular metabolism and tissue function in relation to nutrient requirements are discussed. PREREQ: DFN 445, BIO 181 and 182, CHE 244 and 245, or the equivalent.

DFN 620: Life-Cycle Nutrition. 3 hours, 3 credits. Current concepts and principles in human nutrition, with application to the special needs at various stages in the life cycle in meeting nutritional problems. Includes conferences, fieldwork, and evaluation of fieldwork. PREREQ: 9 credits in nutrition and 6 credits in anatomy and physiology, or permission of Graduate Adviser.

DFN 621: Ethnic and Therapeutic Meal Patterns. 3 hours, 3 credits. An in-depth study of ethnic food patterns and their influences on health, with emphasis on scientific principles of food preparation and meal planning for vulnerable population groups and those on medical nutrition therapy regimens.

DFN 630: Special Topics in Nutrition. 1-3 hours, 1-3 credits (may be reelected, as topics change, for a maximum of 6 credits). Consideration of recent developments in the field of nutrition. PREREQ: 9 credits of core nutrition courses, or permission of advisor.

DFN (HEA) 640: Nutrition and Chronic Diseases. 3 hours, 3 credits. The relationship of diet to health promotion and disease prevention and management. Emphasis on current dietary patterns in the United States and other industrialized nations and the high incidence of degenerative diseases, such as arteriosclerosis, diabetes mellitus, diverticulosis, and cancer. PREREQ: BIO 181 and 182, or the equivalents of these courses.

DFN 641: Public Health and Community Nutrition. 3 hours, 3 credits. The relationship of diet to health promotion and disease prevention. The role of public, private, and voluntary organizations in providing nutrition-care services for ambulatory populations. Techniques for developing, funding, implementing, and evaluating projects in the community. PREREQ: DFN 43 or 620, or their equivalents.

DFN 651: Clinical Nutrition. 3 hours, 3 credits. The assessment and management of nutritional problems encountered in patients in acute and chronic care settings. Includes an exploration of the scientific basis for current techniques and approaches in clinical nutrition. Case studies will be assigned. PREREQ: DFN 448.

DFN 661: Food Service Management. 3 hours, 3 credits. Management theory with application to the food service industry. Emphasis on the management of human and financial resources, the practice of optimal standards of safety, sanitation, and nutrition, and the role of the computer as a management tool.

DFN 692: Independent Study in Clinical Nutrition. 3 hours, 3 credits (may be reelected for a maximum of 6 credits). Independent study under the guidance of a faculty member.

DFN 693: Independent Study in Community Nutrition. 3 hours, 3 credits (may be reelected for a maximum of 6 credits). Independent study under the guidance of a faculty member. PREREQ: 9 credits of core Nutrition courses.

DFN 730: Supervised Professional Practice. 20 hours per week, 2 credits (open only to those accepted into Option III: Dietetic Internship. May be reelected for a maximum of 6 credits). A total of 300 hours of supervised preprofessional practice at approved health care and community sites. PREREQ: DFN 641, 651, or 661 (depending on content of the preprofessional practice). COREQ: DFN 731.

DFN 731: Concepts and Methods of Dietetics Practice. 2 hours, 2 credits. (Course open only to those accepted into Dietetic Internship. Must be taken for 3 semesters and until D.I. requirements are fulfilled.) Examination of current concepts and methods of dietetics practice to prepare students for entry-level professional practice. Includes on-campus didactic activities, group discussions, and the use of case studies to analyze and expand upon the fieldwork experience. COREQ: DFN 730.

DFN 741: Workshop in Nutrition Education. 3 hours, 3 credits. Examination of current methods and materials used in nutrition education, including individual counseling and group instruction. Emphasis is on development, use, and evaluation of appropriate teaching techniques. Includes workshops and fieldwork. PREREQ: DFN 641.

***DFN 761: Nutritional Assessment.** 3 hours, 3 credits. Methods used to evaluate nutritional status, including the analysis and interpretation of assessment data and the identification of actual or potential nutritional problems. Emphasis on the significance of health history and anthropometric, dietary, laboratory, and physical findings in developing a clinically relevant assessment of the client's nutritional status. PREREQ: DFN 445 or 610.

DFN 771: Nutritional Support. 3 hours, 3 credits. The metabolic events associated with physiological stress and their importance in determining nutritional requirements. Identifying, assessing, and managing the patient at risk for protein calorie malnutrition. Emphasis on the use of enteral or parenteral nutrition support to achieve positive nitrogen balance, adequate nutrition status, or weight gain.

DFN 791: Research and Evaluation Methods in Nutrition. 3 hours, 3 credits. Study of the design, methods, and tools used in nutrition research. PREREQ: Nine graduate credits in nutrition, plus HEA 600 or its equivalent.

DFN 792: Practicum in Clinical Nutrition. 6 hours, 3 credits. Supervised placement in health care agencies. Conferences will be conducted to integrate theory with fieldwork experience. PREREQ: 18 credits of the core nutrition courses and adviser's permission.

DFN 793: Practicum in Community Nutrition. 6 hours, 3 credits. Supervised placement in health care or community care agencies. Conferences will be conducted to integrate theory with fieldwork experience. PREREQ: 18 credits of the core nutrition courses and adviser's permission.

DFN 794: Thesis Seminar in Clinical Nutrition. 3 credits (may be reelected for a maximum of 6 credits). Individual research, under supervision, in clinical nutrition or nutritional biochemistry. Credit granted upon completion and acceptance of thesis. PREREQ: DFN 791 and Graduate Adviser's permission.

DFN 795: Thesis Seminar in Community Nutrition. 3 credits (may be reelected for a maximum of 6 credits). Individual research, under supervision, in community or public health nutrition. Credit is granted upon completion and acceptance of thesis. PREREQ: DFN 791 and Graduate Adviser's permission.

COURSES IN PUBLIC HEALTH

PHE 600: Biostatistics in Public Health. 3 hours, 3 credits. Application and interpretation of basic descriptive and inferential statistical methods in the analysis of public health data.

PHE 606: Public Health Epidemiology. 3 hours, 3 credits. Identification, analysis, interpretation, and presentation of epidemiological data for improving the public health of communities. Emphasizes practical public health applications. PREREQ: PHE 600.

PHE 608: Ethics in Public Health. 3 hours, 3 credits. Ethical principles, values and controversies in public health. Historical development of public health professional, and ethical issues and current topics in the field.

PHE 680: Topics in Public Health. 1-3 hour, 1-3 credits. Examination of variable issues and current topics of interest in public health.

PHE 685: Independent Study in Public Health. 1-3 hours, 1-3 credits. Readings in, and critical in-depth examination of, a topic in public health. PREREQ: Faculty permission.

PHE 700: History and Philosophy of Public Health. 3 hours, 3 credits. Examination of historical development and philosophical concepts underlying the practice of public health; social, political, and institutional forces shaping public health policy and the commitment to monitor, protect, and promote the public's health; emphasis on the relationship between public health knowledge, values, and actions.

PHE 701: Public Health Policy and Management. 3 hours, 3 credits. Theoretical concepts, practice, and implementation of public health programs in organized settings; external environment analysis of government structure, laws, and regulations, private sector managed care, and collaborative academic-community partnerships; and examination of internal organizational functions.

PHE 702: Environmental Health. 5 hours (3, lecture; 2, lab), 4 credits. Impact of human activities on environmental quality and human health; effect of environment on health and disease; examination of ecological principles, environmental health assessment, health policy/law and environmental justice; human population dynamics; and types and sources of pollutants and approaches to prevention and control. Environmental disease monitoring and health risk assessment are examined in a two-hour laboratory using Geographical Information Science (GIS).

PHE 703: Social and Behavioral Dimensions of Health. 3 hours, 3 credits. Overview of social and behavioral aspects of health, the influence of social and behavioral factors in the distribution of health and illness among populations, and emphasis on how social science theory informs public health. Based on a social ecological perspective, this course offers an introduction to major theories of behavior change in health promotion, with a focus on applications to public health programs.

PHE 708: Health Informatics. 3 hours, 3 credits. Principles and concepts of informatics; access to key epidemiological databases; research and information retrieval sources; database analysis and design; resource evaluation, management, decision-making, and planning; legal and ethical issues; and the application of computer information systems to public health issues.

PHE 709: Health Equity and Social Justice. 3 hours, 3 credits. Analysis of health disparities and exploration of social, economic, political, and historical determinants of health, including unequal access and treatment by race and ethnicity, patterns of immigration, cultural bases of health, strategies for communicating with diverse populations, and interventions for reducing and eliminating ethnic and racial health disparities from an ethics and public policy perspective.

PHE 710: Applications of Research Methods in Public Health. 3 hours, 3 credits. Principles of statistical and other research methods applied to design of public health studies; analysis, interpretation, and reporting of epidemiological data to public health professionals and lay audiences. PREREQ: PHE 600 and PHE 606.

PHE 715: Program Planning and Evaluation in Public Health. 3 hours, 3 credits. Examination of approaches and methods for planning and evaluating public health programs. Application of theory and the empirical literature as a means of developing skills in evidence-based public health practice. PREREQ: PHE 600 and PHE 606.

PHE 720: Chronic Disease Epidemiology. 3 hours, 3 credits. Overview of causative factors and demographic distribution of major chronic diseases in the western world. Epidemiological concepts, methods, and research design as applied to chronic disease prevention. Role of screening in controlling chronic disease. PREREQ: 18 credits from PHE core courses, including HSD 606.

PHE 721: Infectious Disease Epidemiology. 3 hours, 3 credits. Natural history, methods of control, and current perspectives of infectious diseases; epidemiological methods for the investigation of infectious diseases; epidemic models; bio-terrorism. PREREQ: 18 credits from PHE core courses, including HSD 606.

PHE 722: Globalization and International Health. 3 hours, 3 credits. Epidemiological aspects of major global public health problems. Focus on principles, basic statistical analysis, public health surveillance, field investigation, and surveys and sampling. Governmental responses to epidemics, disasters, and outbreaks. PREREQ: 18 credits from PHE Core Courses, including HSD 606.

PHE 723: Advanced Methods in Epidemiology. 3 hours, 3 credits. Design, conduct, analyze, and interpret epidemiologic studies using experimental (community intervention trials), non-experimental, and observational (cohort, case-control) methods. Study of research designs, including subject selection, measurement, methodology, data analysis, and practical application of statistical concepts. PREREQ: 6 credits from PHE 720, 721, or 722.

PHE 730: Healthcare Financing and Economics. 3 hours, 3 credits. Financial management principles and concepts in public health organizations, including resource allocation and funding sources; government and private/market sector budgeting processes and analyses; economic and outcome analysis of public health interventions. PREREQ: 18 credits from PHE core, including PHE 701.

PHE 731: Community Participation and Advocacy. 3 hours, 3 credits. Role of advocacy in advancing public health, including techniques and strategies for organizing, educating, and effecting change; identifying common needs and interests, community participation, collaboration, and coalition-building; analysis of political environments and proposed legislation. PREREQ: 18 credits from PHE core, including PHE 701.

PHE 732: Healthcare Policy and Politics. 3 hours, 3 credits. Role of government and political institutions in American health policy, including concepts, theories, and analysis of social, economic, and political power in relation to health policy; public and private sector relationships in delivering health services; the formulation, process and implementation of public health policy and program development. PREREQ: 18 credits from PHE core, including PHE 701.

PHE 733: The Practice of Quality Management. 3 hours, 3 credits. Conceptual bases for quality assessment, improvement, and assurance. Measures of efficiency and effectiveness, including evaluation of performance, evaluation of outcome studies, and applications quality management to public health practice and programs. PREREQ: 18 credits from PHE core courses, including PHE 701.

PHE 770: Public Health Internship. 6 hours, 3 credits. Supervised field experience (90 hours) in an approved public health agency or community health organization. PREREQ: Completion of PHE Core (28 credits and 6 credits in specialization courses.) COREQ: PHE 790 and Graduate Adviser's permission.

PHE 790: Public Health Practice Capstone Seminar. 1-3 hours, 1-3 credits. Examination of academic, community, government, and private sector public health partnerships from an interdisciplinary perspective, culminating in a seminar project. PREREQ: PHE 770.

PHE 791: Master's Thesis in Public Health. 3 credits. Individual research in public health under faculty supervision. Development of a comprehensive thesis. Credit gained upon completion and acceptance of thesis. PREREQ: PHE 790 and faculty permission.

PHE 792: Public Health Capstone Project. 3 hours, 3 credits. Analysis and writing of a public health capstone project. This project is completed with the approval and under the supervision of M.P.H. faculty. PREREQ: PHE 770.

COURSES IN RECREATION

REC 680: Special Topics in Recreation. 3 hours, 3 credits (may be reelected for credit as the topic changes, with Graduate Adviser's permission). Consideration of recent developments in the field of recreation, with special emphasis on interdisciplinary contributions. PREREQ: Graduate Adviser's permission.

REC 700: Recreation and Leisure in Modern Society. 3 hours, 3 credits. Examines basic concepts of play and recreation, with emphasis on changing leisure trends and the provision of organized recreation programs by public, voluntary, therapeutic, and commercial agencies.

REC 701: Research Methods and Evaluation in Recreation. *3 hours, 3 credits.* Presentation of research designs, methods, and instruments. Examination of goals and techniques of evaluation in organized recreation service. PREREQ: HEA 600.

REC 702: Recreation Program Planning and Leadership. *3 hours, 3 credits.* Program planning, scheduling, and operation in public, voluntary, therapeutic, and commercial settings. Basic principles and practices in group leadership.

REC 703: Administrative Process in Recreation and Parks. *3 hours, 3 credits.* Analyzes the administration of recreation and park programs in varied settings, including goal setting and policy development, personnel and facilities management, fiscal operations, and public and community relations.

REC 704: Therapeutic Recreation Service. *3 hours, 3 credits.* Examines conceptual bases, goals, and practices of therapeutic recreation service for diverse populations and settings, including philosophical foundations, historical and professional development, models of practice, ethics, trends, and issues.

REC 705: Community Recreation and Park Facilities. *3 hours, 3 credits.* Examines design, construction, and maintenance of varied recreation and park facilities: parks, playgrounds, centers, pools, athletic complexes, and other special structures.

REC 706: Outdoor Education and Recreation. *3 hours, 3 credits.* Environmental education and nature-oriented recreation programs, as part of the program of schools and community recreation and parks departments. Analyzes goals, methods, and resources; includes field trips.

REC 707-712: Specialized Programs in Therapeutic Recreation Service. *3 hours, 3 credits.* Examination of therapeutic recreation services for individuals with disabilities in a variety of settings. PREREQ: Permission of Graduate Adviser.

707: Therapeutic Recreation in Geriatric Settings

708: Therapeutic Recreation in Psychiatric Rehabilitation

709: Therapeutic Recreation and Developmental Disability

710: Therapeutic Recreation Applications to Social Problems

711: Therapeutic Recreation Programs and Physical Disability

712: Leisure Counseling and Community Programs

REC 715: Clinical Practice and Internship. *6 hours, 3 credits.* Field placement in approved institution or community agency, including therapeutic, public, or voluntary settings. Required for graduate recreation majors without professional experience. PREREQ: REC 700, 702, and either 703 or 704, and permission of Graduate Adviser.

REC 781: Research Seminar. *3 hours, 3 credits.* Students examine published research and develop thesis proposals. Those who receive committee approval of proposals during the semester may begin actual research. PREREQ: Nine graduate credits in recreation, including REC 700 or 701, and approval of Graduate Adviser.

REC 790: Independent Study in Recreation. *1-3 hours, 1-3 credits.* (May be reelected for up to 3 credits.) Planned program of individual study under the guidance and supervision of a member of the department. PREREQ: Permission of Graduate Advisor and 6 credits in Recreation.

REC 791: Thesis. *3 credits.* Individual research under faculty supervision. Credit gained upon completion and acceptance of thesis. PREREQ: REC 701 and 781.

COURSE IN EXERCISE SCIENCE

EXS 680: Selected Topics in Exercise Science. *3 hours, 3 credits.* Examination of various topics in exercise science. Topics to be announced each semester. (May be reelected for a maximum of 6 credits.)

History

Chair: Timothy Alborn (Carman Hall, Room 202B)
Graduate Adviser: Evelyn Ackerman (Carman Hall, Room 296)
Department Faculty: Distinguished Professor: Joseph W. Dauben; Professors: Evelyn B. Ackerman, Jose Luis Rénique; Associate Professors: Timothy Alborn, Martin J. Burke, Dina Le Gall, Marie C. Marianetti, Andrew W. Robertson, Duane Tananbaum; Assistant Professors: Cindy Lobel, Robyn C. Spencer, William Wooldridge, Amanda Wunder; Lecturer: Robert T. Valentine

The Department of History offers a Master of Arts degree in History that is intended primarily for students who anticipate that the master's degree will be their highest earned degree. The course of study is designed to offer an introduction to the professional study of history and to provide mastery of a broad area of history. In addition, the Department offers courses designed to meet the needs of students in the programs for Middle and High School Teachers of Social Studies and for Elementary School Teachers. Students with a specialization in History (see Program for Middle and High School Teachers of Social Studies) should consult the Department chair early in their course of studies.

M.A. PROGRAM IN HISTORY

Admission Requirements

- Possess a bachelor's degree (or its equivalent) from an accredited college or university.
- Have demonstrated the potential to successfully pursue graduate study—that is, have attained a minimum undergraduate grade average of B in History courses and a minimum grade average of B- in the undergraduate record as a whole.
- Have taken a minimum of 18 credits of coursework in History, acceptable to the Department.
- Submit two letters of recommendation.
- Submit scores on the Graduate Record Examination (G.R.E.).
- Submit a 1-2-page essay consisting of responses to application-packet questions.
- Submit a sample of college-level writing.
- If conditionally admitted, satisfy the conditions within one year.

Degree Requirements

The general requirements for the M.A. Degree in History consist of 36 credits of coursework:

- HIS 780 and 781 in the first year (6 credits)
- Other coursework at the 700-level (24 credits)
- Comprehensive oral examination (0 credits)
- HIS 797 (master's thesis) (6 credits)

After successfully completing 30 credits of coursework with a 3.0 average, each student must pass a comprehensive oral examination in two fields. Candidates for the M.A. degree must then present a master's thesis, prepared under the direction of a Thesis Supervisor from the Department of History and an approved second reader, and accepted by the Thesis Supervisor.

HISTORY OF ANCIENT AND MEDIEVAL CIVILIZATION

HIA 706: History of Religions in the Ancient World. 3 hours, 3 credits. (Not open to students who have taken HIA 306.) A survey of religious beliefs and practices of the Ancient Near Eastern and Mediterranean worlds. Religious customs of the ancient Mesopotamian cultures; Mycenaean, Minoan, and Classical Greek

myth and ritual; Hellenistic religions and mystery religious cults; private household worship in the Roman Republic; and public religious faith in the Roman Empire.

HIA 714: Classical Myth and Society. 3 hours, 3 credits. (Not open to students who have taken HIA 314.) A comparison of the origins and development of classical mythology and heroic legend as religious beliefs, their relation to other mythologies, and their adaptation in literature and art from Hesiod and Homer through the present. A comparative analysis of Near Eastern and Nordic myth will be provided.

HIA 720: History of Ancient Greece. 3 hours, 3 credits. (Not open to students who have taken HIA 320). The Ancient Greeks from prehistoric times through the development of the City-State to the death of Alexander the Great. The political, economic, social, and cultural achievement during the Bronze and the Dark Ages, the Archaic and the Classical Period, and the Hellenistic Era.

HIA 721: History of Rome. 3 hours, 3 credits. (Not open to students who have taken HIA 321.) Foundation and development of the Roman state, including the rise and decline of the Roman Republic and the establishment and the fall of the Empire, with emphasis on its political, economic, social, and cultural achievements.

HIA 750: Topics in Ancient and Medieval History. 3 hours, 3 credits. (May be repeated as often as the topic changes). Various sections in topics in Ancient History. (For specific topics and sections each semester, consult the Department.)

HISTORY OF MODERN EUROPE

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

HIE 702: The Age of the Reformation. 3 hours, 3 credits. (Not open to students who have taken HIE 302.) Conditions of life, society, and politics on the eve of the Reformation; abuses in the early sixteenth-century Roman Catholic church and Catholic reform before Luther; Luther's personality and theology; the problems of when and why Luther broke from Rome; religious radicalism and peasant revolt as unintended results of Lutheran reform.

HIE 703: The Age of the Counter-Reformation. 3 hours, 3 credits. (Not open to students who have taken HIE 303.) Religious persecution, ideological warfare, and political rebellion in the context of sixteenth-century Counter-Reformation Catholicism and Calvinism. Topics studied include the Spanish Inquisition, the Netherlands' revolt against Spain, the St. Bartholomew's Massacre, the French religious wars, and the Armada.

HIE 707: Europe Under the Old Regime. 3 hours, 3 credits. (Not open to students who have taken HIE 307.) Society, politics, and economy in Europe from 1600 to 1789. Enlightened absolutism in France and Prussia; the English Civil War and the Glorious Revolution; changes in the rural economy; the rise of religious enthusiasm; foreign trade and colonial expansion; the rise of the middle classes; the Enlightenment and the origins of the French Revolution.

HIE 708: The French Revolution and Napoleon. 3 hours, 3 credits. (Not open to students who have taken HIE 308.) Preconditions of discontent in late eighteenth-century France; the origin and unfolding of the French Revolution; the Thermidorean Reaction; and the rise of Napoleon and his influence in Europe.

HIE 709: Europe, 1815-1914. 3 hours, 3 credits. (Not open to students who have taken HIE 309.) Political, economic, social, and intellectual ideas and developments from the Congress of Vienna to World War I.

HIE 710: History of European Diplomacy. 3 hours, 3 credits. (Not open to students who have taken HIE 310.) Survey of European diplomacy, with special emphasis on nineteenth- and twentieth-century developments.

HIE 714: Europe in the Twentieth Century. 3 hours, 3 credits. (Not open to students who have taken HIE 314.) World War I; the rise and fall of communism in Russia and Eastern Europe; Fascism; World War II; postwar prosperity; European union; and the impact of immigration.

HIE 715: The Enlightenment. 3 hours, 3 credits. (Not open to students who have taken HIE 315.) Travel literature and the early Enlightenment; the spread of Enlightenment ideas, such as natural laws, natural rights, and market forces.

HIE 716: The History of Ideas and Ideologies in Nineteenth-Century Europe. 3 hours, 3 credits. (Not open to students who have taken HIE 316.) The social and intellectual formation of liberalism, conservatism, nationalism, socialism, and anarchism, and their impact on political and social change in modern Europe.

HIE 717: The History of Ideas and Ideologies in Twentieth-Century Europe. 3 hours, 3 credits. (Not open to students who have taken HIE 317.) The social movements and ideas that have shaped our modern consciousness, including communism, fascism, existentialism, feminism, revolution, and total war.

HIE 721: Tudor-Stuart England. 3 hours, 3 credits. (Not open to students who have taken HIE 321.) The advent of the Tudor dynasty, Henry VIII, the divorce, and the church; Queen Elizabeth's government and the church; Elizabethan society; poverty and vagrancy in the Tudor state; the divine right of kings and mass political attitudes in early Stuart England; the origins of the civil war; the execution of Charles I; Oliver Cromwell and the saints; restoration England; and the Glorious Revolution.

HIE 722: Britain in the Age of Industrialization and Empire. 3 hours, 3 credits. (Not open to students who have taken HIE 322.) Modern Britain in the eighteenth and nineteenth centuries. The impact of the industrial revolution on British society; the American Revolution; democratization; depression, imperialism, and the new liberalism; and the Irish question in British politics.

HIE 723: Britain in the Twentieth Century. 3 hours, 3 credits. (Not open to students who have taken HIE 323.) World War I and its effects on politics and society; the economic crisis of 1931 and the National Government; depression; Churchill, and the war effort; the Labour Party, nationalization and the welfare state after 1945; decolonization; economy and society under Thatcher; the rise of New Labour.

***HIE 725: Italy from Napoleon through Mussolini.** 3 hours, 3 credits.

HIE 730: History of Modern France. 3 hours, 3 credits. (Not open to students who have taken HIE 330.) French politics, society, economy, and culture from the fall of Napoleon to the crisis of 1968. The revolutions of the nineteenth century, colonial policy and decolonization, World Wars and recovery after 1950.

HIE 733: Modern Ireland. 3 hours, 3 credits. (Not open to students who have taken HIE 333.) The political, economic, social, and cultural history of Ireland from the late eighteenth century to the present.

***HIE 735: History of Spain.** 3 hours, 3 credits.

HIE 736: Early Russian History. 3 hours, 3 credits. (Not open to students who have taken HIW 309 or HIE 336.) Origins of Russian history, Kievan, Muscovite, and early Imperial Russia to 1855.

HIE 737: Modern Russian History. 3 hours, 3 credits. (Not open to students who have taken HIW 310 or HIE 337.) Russia from 1855 to the present, including the late Imperial and Soviet eras.

HIE 741: Germany from Bismarck through Hitler. 3 hours, 3 credits. (Not open to students who have taken HIE 341.) Study of Germany from Bismarck and the unification through Hitler, the Nazi regime, and the Second World War, with a brief survey of postwar development.

HIE 743: The Holocaust. 3 hours, 3 credits. (Not open to students who have taken HIE [HCU] 343.) Study of the destruction of Jews of Europe during World War II. Political anti-Semitism in modern Europe; the rise of Hitler and Nazism. The interwar period in Europe and the spread of anti-Semitism. World War II, ghetto, deportation, and liquidation. Problems of rescue and resistance. Selected readings from the literature of the Holocaust.

HIE 750: Topics in European History. 3 hours, 3 credits. (May be repeated as often as the topic changes.) Various sections in topics in European history. (For specific topics and sections each semester, consult the Department.)

SPECIAL AND COMPARATIVE HISTORICAL TOPICS

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

HIS 701: History of Science from Descartes and Newton to Darwin and Einstein. 3 hours, 3 credits. (Not open to students who have taken HIE 301.) This course examines the nature and significance of scientific thinking in the work of Descartes, Leibnitz, and Newton; the conflicts between science and religion in the seventeenth century; materialism's penetration of biology from physics; the revolution in chemistry associated with Priestley and Lavoisier; the interface between science and the industrial revolution; the work of the French biologist Claude Bernard, illustrating the development of biology and experimental medicine; the startling work of Charles Darwin; and twentieth-century topics, such as field and atomic theory, relativity, and quantum theory and their important philosophical implications.

HIS 702: Science and Society. 3 hours, 3 credits. (Not open to students who have taken HIS 302.) Social aspects of the growth of modern science from the seventeenth century to the present. Religion and science in Galileo's Italy, science and technology during the industrial revolution, scientific institutions during the French Enlightenment, Darwin and Social Darwinism, eugenics and racial hygiene, big science, and the human genome project.

HIS 704: Science in the Twentieth Century. 3 hours, 3 credits. (Not open to students who have taken HIS 304.) A multidisciplinary survey of scientific and technological development in the twentieth century, emphasizing the ethical issues and social implications arising from them. Topics may include recent work in microbiology, DNA, and genetic engineering; theories of relativity, quantum physics, atomic weapons, and nuclear energy; technological innovations in synthetic materials, chemical warfare, and consumers' concerns; anthropological discoveries and human evolution; Freudian psychology and psychoanalysis; man in space, medical science, and portents for the future of civilization. Students need to have extensive background in the sciences.

***HIS 724: American Urban Architecture.** 3 hours, 3 credits.

HIS 727: World Revolutions. 3 hours, 3 credits. (Not open to students who have taken HIS 327.) The nature, causes, and results of revolutionary change, including the French, the American, the Haitian, the Russian, and the Chinese revolutions, and the depiction of revolutionary change in art, theater, and literature.

HIS 734: The Irish Diaspora. 3 hours, 3 credits. (Not open to students who have taken HIS 334.) A survey of the circumstances and consequences of Irish immigration from the eighteenth century to the present, including the patterns of settlement and assimilation of Irish immigrants in the West Indies, the United States, Canada, England, Scotland, Wales, Australia, New Zealand, and South Africa.

*HIS 735: **The Rise of Fascism.** 3 hours, 3 credits.

HIS 742: Anti-Semitism from Early Christianity to Hitler. 3 hours, 3 credits. (Not open to students who have taken HIS [HCU] 342.) The origin of conflict between Christianity and Judaism, and the fate of Jews in Medieval Europe. The gradual liberation and assimilation of the Jews of Western Europe, 1789-1870. The rise of modern racism and anti-Semitism in Europe, 1889-1939. Hitler, the Nazis, and the destruction of European Jewry during World War II. Anti-Semitism in the contemporary world. Social-psychological and cultural theories of anti-Semitism will be considered.

HIS 750: Topics in Comparative History. 3 hours, 3 credits. (May be repeated as often as the topic changes.) Various sections in history in comparative history. (For specific topics and sections each semester, consult the Department.)

*HIS 764: **Topics in Medieval History.** 3 hours, 3 credits.

HIS 780: Seminar in History. 3 hours, 3 credits. Research in selected topics and historical problems.

HIS 781: Advanced Tutorial Project in History. 3 hours, 3 credits. Advanced individual reading and research paper on a specific topic in history, under faculty direction. PREREQ: Satisfactory completion of HIS 780.

HIS 795: Independent Reading. 3 hours, 3 credits. (May be repeated with permission of the chair.) Reading on special topics chosen in consultation with a member of the Department.

HIS 797: Master's Thesis Preparation. 6 credits. (Open only to students matriculated for the M.A. degree. Six credits may be offered toward the M.A. degree.)

HISTORY OF THE UNITED STATES

*Courses preceded by an asterisk are not expected to be offered in 2009-2011.

HIU 534: U.S. History and Historiography. 3 hours, 3 credits. Important themes in U.S. history from the Colonial period to the present, with a focus on the content and critical thinking needed to teach this topic at the middle and high school level.

HIU 701: Colonial British America, 1586-1763. 3 hours, 3 credits. (Not open to students who have taken HIU 301.) The British colonies in North America from the lost English settlement at Roanoke to the treaty ending the French and Indian War. The collision of Europeans and Native Americans, conflicts between the European colonial powers, the establishment of slavery in North America, and political, social, and religious development.

HIU 704: The Era of the American Revolution, 1763-1789. 3 hours, 3 credits. (Not open to students who have taken HIU 304.) American development from the mid-eighteenth century through the framing of the Constitution, with emphasis upon the American Revolution, the interrelation of European and American affairs, and the growth of American institutions and ideals.

HIU 705: The Early Republic, 1789-1824. 3 hours, 3 credits. (Not open to students who have taken HIU 305.) The founding and development of a republican form of government: the evolution of political parties, the economic growth of the nation and its impact on politics, and the transition from a republic to a democracy engendered by economic growth and the search for political power.

HIU 708: Democracy, Sectionalism, and Slavery in the U.S., 1810-1825. 3 hours, 3 credits. (Not open to students who have taken HIU 308.) The age of the common man in politics, increasing sectional tensions, and the prominence of the slavery issue in American life. Abolitionism, workingmen's agitation, women's rights, westward expansion, states' rights, the defense of slavery, and the coming of the Civil War.

HIU 709: The Civil War and Reconstruction, 1861-1877. 3 hours, 3 credits. (Not open to students who have taken HIU 309.) Key events of the Civil War and its aftermath, including emancipation and the status and role of newly freed Black Americans.

HIU 710: The Gilded Age and the Progressive Era, 1877-1914. 3 hours, 3 credits. (Not open to students who have taken HIU 310.) Industrialization and the rise of the corporation, the importance of the transcontinental railroads, immigration, urbanization, black disenfranchisement, Jim Crow and the emergence of the New South, populism, the integration of the Far West, Progressivism, and trust busting.

HIU 714: The United States, 1914-1945. 3 hours, 3 credits. (Not open to students who have taken HIU 314.) Domestic and foreign affairs, including the two World Wars, the Roaring Twenties, the Great Depression, and Franklin Roosevelt and the New Deal.

HIU 715: Recent United States History, 1945 to the Present. 3 hours, 3 credits. (Not open to students who have taken HIU 315.) Domestic and foreign affairs since the end of World War II. The Cold War and anti-Communism at home and abroad, and changes in American social, economic, and political values and institutions.

HIU 716: The American Constitution in Historical Perspective. 3 hours, 3 credits. (Not open to students who have taken HIU 316.) The American constitutional system from the American Revolution to the present. The evolution of legal structures, the growth of rights and remedies, the changing content of justice, organization of government, the balance of freedom and order.

HIU 717: History of American Foreign Relations, 1750-1912. 3 hours, 3 credits. (Not open to students who have taken HIU 317.) A history of American foreign relations from colonial times to the early twentieth century, with emphasis on the diplomacy of the American Revolution; foreign affairs and the Constitution; the War of 1812; the Monroe Doctrine; expansion, sectionalism, and the coming of the Civil War; and America's emergence as a world power.

HIU 718: History of American Foreign Relations, 1912-Present. 3 hours, 3 credits. (Not open to students who have taken HIU 318.) American foreign relations from the early twentieth century to the present. The U.S. role in World Wars I and II; the Cold War; and the growth of presidential power in foreign affairs.

HIU 719: The United States and the Vietnam War. 3 hours, 3 credits. (Not open to students who have taken HIU 319.) The reasons why the United States became involved in the Vietnam War, the methods employed, and the consequences of U.S. involvement.

HIU 720: Early American Cultural and Intellectual History. 3 hours, 3 credits. (Not open to students who have taken HIU 320.) The major ideas, institutions, and individuals in American cultural and intellectual life from the mid-seventeenth through the late-nineteenth centuries. Puritanism; the Enlightenment in America; republicanism and romanticism; and the professionalization of letters and learning.

HIU 729: History of Sexuality and Sex Roles in America. 3 hours, 3 credits. (Not open to students who have taken HIU 329.) The social history of sexual roles as they have developed and changed in America from colonial times to the present.

HIU 731: History of Women in America. 3 hours, 3 credits. (Not open to students who have taken HIU 331.) Historical study of women's conditions, statuses, and roles in American society from colonial times to the present.

HIU 732: History of Health Care in the United States. 3 hours, 3 credits. (Not open to students who have taken HIU 332.) Examination of health care in America from colonial times to the present. Topics include the development of the medical profession, the rise of the public health movement, the growth of hospitals, and popular attitudes toward health and disease.

HIU 733: American Urban History. 3 hours, 3 credits. (Not open to students who have taken HIU 333.) The formation, growth, and transformation of American cities from the wilderness village to the megalopolis. Emphasis on the changing political and economic roles of cities, patterns of social stratification, power, and mobility; and trends in recent urban social and cultural life.

HIU 735: Immigration in America. 3 hours, 3 credits. (Not open to students who have taken HIU 335.) The motives and aspirations of immigrants, their contributions to the effects on American social structure, and the tensions between assimilation and ethnicity.

***HIU 736: American Religious History.** 3 hours, 3 credits. (Not open to students who have taken HIU 336.) Religious belief and behaviors of Americans from the seventeenth century to the present. Encounters among European, African, and indigenous religions; Christianization, evangelicalism, and revivalism; church and state relations; and religiously based movements for social reform.

HIU 738: The Family in American History. 3 hours, 3 credits. (Not open to students who have taken HIU 328.) Historical study of the family in America, including its European roots and its relationship to the frontier, slavery, immigration, and current developments in industrialism, urbanization, and technology.

***HIU 740: The Industrial Revolution in America.** 3 hours, 3 credits.

HIU 741: American Business History. 3 hours, 3 credits. (Not open to students who have taken HIU 341.) The rise of business enterprise in America from its earliest commercial origins to giant corporations and conglomerates. Themes include the rise of early commerce; emergence of consolidated industry; prominent businessmen and business techniques; analysis of business philosophy and entrepreneurial attitudes; reactions to corporate power by labor and government; evolution of business forms and structures; and the impact of business enterprise on the political, legal, and cultural development of America.

HIU 742: History of American Labor. 3 hours, 3 credits. (Not open to students who have taken HIU 342.) The American worker from colonial times to the present, with emphasis on the period since the Civil War. Themes include the origins and character of the American labor movement; the impact of industrialization on the worker; slavery and wage labor; the growth and development of the major American labor unions; the impact of social reformers and radicals on the labor movements and the American worker; public employees and collective bargaining; and the changing attitudes of the American worker.

HIU 745: American Economic History. 3 hours, 3 credits. (Not open to students who have taken HIU 345.) Studies in American economic development from the agricultural and commercial economy of the colonies to contemporary U.S. preeminence as an industrial nation. Attention will be given to the economic institution and policy with regard to political and social developments.

HIU 746: History of the American Presidency. 3 hours, 3 credits. (Not open to students who have taken HIU 346.) America's presidents and how the presidency has developed from George Washington to the present.

HIU 747: The Mainland Borough: The Bronx as a City in History. 3 hours, 3 credits. (Not open to students who have taken HIU 347.) The urban history of the Bronx from the seventeenth century to the present. Major emphasis on 1874-1945, the period of the Borough's most rapid growth and experience with modern urban problems. Topics include ethnic in-migration and mobility; the effects of mass-transit development; Prohibition; and the ways various external events, such as wars and depression, have influenced the borough and its people.

HIU 748: History of New York—City and State. 3 hours, 3 credits. (Not open to students who have taken HIU 348.) Examination of the interaction between the urban center and the State from their respective origins as New Amsterdam and New Netherland to the twentieth century. Special emphasis is placed on the socio-economic reasons for the cosmopolitan nature of the metropolis and its uniqueness as a major urban entity.

HIU 750: Topics in American History. 3 hours, 3 credits. (May be repeated as often as the topic changes.) Various sections in topics in American history. (For specific topics and sections each semester, consult the Department.)

HISTORY OF ASIAN, LATIN AMERICAN, AND NON-WESTERN CIVILIZATIONS

HIW 533: World History and Historiography. 3 hours, 3 credits. Important themes in world history, with a focus on the content and critical thinking needed to teach this topic at the middle and high school level.

HIW 701: Ottoman History. 3 hours, 3 credits. (Not open to students who have taken HIW 301.) Political, socio-economic, and cultural history of the Ottoman Empire from its fourteenth-century beginnings to its demise at the end of World War I.

HIW 702: Modern Middle Eastern History. 3 hours, 3 credits. (Not open to students who have taken HIW 302.) Societies and politics of the Middle East in the nineteenth and twentieth centuries. The Islamic and Ottoman legacies, reforms and reforming elites, changing roles of religion, nationalist ideologies, Great Power intervention, regional politics, and the Arab-Israeli conflict.

HIW 703: Contemporary Islamic Movements. 3 hours, 3 credits. (Not open to students who have taken HIW 303.) Contemporary movements of Islamic resurgence and activism in the Middle East, North Africa, Central and South Asia, and beyond.

HIW 705: The Arab-Israeli Conflict. 3 hours, 3 credits. (Not open to students who have taken HIW 305.) The Arab-Israeli conflict from the late nineteenth century to the present; political, military, diplomatic, economic, cultural, and psychological dimensions.

HIW 723: History of Africa to 1800. 3 hours, 3 credits. (Not open to students who have taken HIW 323.) Survey of African history from the earliest times to 1800. Beginning with the development of early human societies, the course will cover environmental, social, economic, political, and religious transformations before 1800.

HIW 727: History of Africa 1800 to the Present. 3 hours, 3 credits. (Not open to students who have taken HIW 327.) Survey of African history from 1800 to the present. Beginning with large-scale internal transformations in the nineteenth century, the course will address social, economic, political, and religious transformations on the continent since 1800.

HIW 730: Nineteenth-Century Latin American History. 3 hours, 3 credits. (Not open to students who have taken HIW 330.) Examination of the broad changes and continuities in Latin America over the course of the "long nineteenth century," from political independence in the 1820s to the rise of nationalist challenges to liberalism in the 1930s.

HIW 731: Modern Latin America. 3 hours, 3 credits. (Not open to students who have taken HIW 331.) Examination of the nations of Latin America from the beginning of the twentieth century to the present, with a focus on political reform and revolution, economic development, and social movements.

HIW 737: Latin America and the United States from 1823 to the present. 3 hours, 3 credits. (Not open to students who have taken HIW 337 or LAC 337.) Relations between the United States and Latin American countries since their creation as independent republics.

HIW 738: Colonial Latin America. 3 hours, 3 credits. (Not open to students who have taken HIW 330 or HIW 338.) Examination of the construction and development of colonial societies in Latin America from the encounters of the sixteenth century to the crisis of the Iberian empires in the late eighteenth century.

HIW 745: History of South America. 3 hours, 3 credits. Examination of the pre-Columbian and colonial foundations of the nation-state and the construction of modern nations in South America in the post-independence period. Special emphasis on the challenge of creating viable political systems in the context of geopolitical pressures and local complexities.

HIW 748: Europe and the Non-Western World in the Nineteenth and Twentieth Centuries. 3 hours, 3 credits. (Not open to students who have taken HIW 348.) Imperialism and colonialism in Africa and Asia, the growth of nationalism, decolonization, revolution, independence, and globalization.

HIW 750: Topics in Non-Western History. 3 hours, 3 credits. (May be repeated as often as the topic changes.) Various sections in topics in non-Western history. (For specific topics and sections each semester, consult the Department).

Journalism, Communication, and Theatre

Chair: Patricio Lertzundi (Carman Hall, Room 259)
Department Faculty: Professors: William M. Hoffman, Patricio Lertzundi, Miguel Perez, Robert Whittaker; Associate Professors: Richard Blot, Marjorie Rosen; Assistant Professors: Nicholas Boston, Claudia W. Case, Amy Larimer, Thomas O'Hanlon, Susan Watson-Turner; Lecturers: Anne Bard, James Carney, Philip Ruiz; Distinguished Lecturer: Marilyn Sokol

The Department of Journalism, Communication, and Theatre offers a graduate program leading to the degree of Master of Arts in Theatre. Registration in all courses requires Departmental permission. Upon admission to the program, students must see the Graduate Coordinator, who will assign an area adviser to guide the student's course of study.

M.A. PROGRAM IN THEATRE

Admission Requirements*

- A bachelor's degree (or its equivalent) from an accredited college or university.
- Demonstrate the potential to successfully pursue graduate study, that is, have attained a minimum undergraduate grade average of B+ in the field selected for the graduate major and a minimum grade average of B+ in the undergraduate record as a whole.
- Students accepted for matriculation in the M.A. Program in Theatre must have completed the Lehman College undergraduate major in Theatre, or its equivalent at another institution, or have completed 27 credits of prerequisite coursework.
- Two letters of recommendation.

*Note: Students are not being accepted into this program in the period 2009-2011.

Degree Requirements

Each candidate must complete an approved program of study of at least 30 credits, which shall include SPE 700 (Introduction to Research Methods). Up to nine hours of related courses in other departments may be counted toward the 30 credits, with permission of the Graduate Coordinator.

In addition to the course requirements, the candidate must (1) present an acceptable thesis in the student's area of specialization and/or (2) complete and satisfactorily pass an oral and/or written comprehensive examination. The student's choice requires approval by a faculty committee in the area of specialization. A student who does not write a thesis may not take THE 799 (Thesis Seminar). Instead, the student must earn 3 credits in another course, to achieve a total of 33 credits.

COURSES IN THEATRE

THE 670: Advanced Oral Interpretation. 3 hours, 3 credits. Oral interpretation of poetry, prose, and dramatic literature in the English language.

THE 671: Seminar in Oral Interpretation. 3 hours, 3 credits. Research in the theory and practice of oral interpretation. PREREQ: THE 670 or Graduate Adviser's permission.

THE 676: Creative Dramatics and Theatre for Children. 3 hours, 3 credits. Theory and practice of producing plays for and with children, including the techniques of creative play and story improvisation.

THE 720: Theory of Theatre Aesthetics. 3 hours, 3 credits. (Required of all students specializing in Theatre.) Examination of major historical and contemporary theories concerning the origins of theatre, its social and aesthetic functions, and its relationship to other art forms.

THE 725: Independent Study. 3 hours, 3 credits. Directed study under the supervision of a member of the faculty. PREREQ: Graduate Adviser's permission.

THE 730: Theatre Criticism I. 3 hours, 3 credits. (Required of all students specializing in theatre.) Study of chief critical methods. Analysis of major critics from Aristotle to the present, and evaluation of the impact of these critics on theatre trends.

THE 731: Theatre Criticism II. 3 hours, 3 credits. (Required of all students specializing in Theatre.) Continuation of Theatre Criticism I, with emphasis on contemporary critical trends.

THE 733: Tragedy in Theatre. 3 hours, 3 credits. Problems in staging for contemporary audiences; Greek, Elizabethan, and neoclassic tragedy.

THE 734: Comedy in Theatre. 3 hours, 3 credits. Analysis of major comedic devices employed in the theatre with relation to historical-contemporary comic genres.

THE 740: Studies in Theatre. 3 hours, 3 credits. (May be reelected for credit as often as the topic changes.) Intensive study of a particular period, playwright, or style of drama.

THE 761: Nonverbal Theatre. 3 hours, 3 credits. Theory and practice of traditional and contemporary theatre forms that emphasize pantomime, dance, ritual, music, and song.

THE 763: Styles of Acting. 3 hours, 3 credits. Theory and technique of historical and presentational acting styles. PREREQ: Graduate Adviser's permission.

THE 765: Directing. 3 hours, 3 credits. Major theories of directing, and problems of relationship between director and actor.

THE 796: Special Problems. 3 hours, 3 credits. (May be reelected for credit up to maximum of 6 credits.) Directed study under supervision of a member of the faculty. PREREQ: Graduate Adviser's permission.

THE 799: Thesis Seminar. 3 credits. Individual research supervision.

COURSES IN MASS COMMUNICATION

COM 502: Speech in the Language Arts Program in the Elementary and Junior High Schools. 3 hours, 3 credits. The employment of choral speaking, dramatics, radio and TV, group discussion, and other forms of oral communication.

COM 600: Philosophical Foundations of Speech Education. 3 hours, 3 credits. Exploration of the philosophical foundations of speech education and of the background of scientific and artistic thought in various areas of speech and its impact on present-day speech education.

COM 601: Studies in the Teaching of Speech in the High Schools. 3 hours, 3 credits. Teaching and learning problems in contemporary high school speech communication curricula. PRE- or COREQ: Student teaching or teaching experience.

COM 744: Mass Communications and Society. 3 hours, 3 credits. Mass media of communication. Analysis of the effects of broadcasting on the individual and society. The philosophy of aesthetics and the psychology of mass communication.

COM 760: Form and Style in Communication. 3 hours, 3 credits. Consideration of form and style in communication.

COM 761: British Public Address. 3 hours, 3 credits. Analysis of British public address, with emphasis on the orators of the eighteenth and nineteenth centuries.

COM 763: American Public Address. 3 hours, 3 credits. Analysis of representative American oratory, from colonial times to the present.

COM 765: Seminar in Public and Group Communication. *3 hours, 3 credits.* Special topics and issues in public and group communication.

COM 766: Persuasion Theory. *3 hours, 3 credits.* Survey of descriptive and experimental research in persuasion.

COM 767: Communication Theory. *3 hours, 3 credits.* Major concepts, theories, and models of the communication process.

COM 768: Small Group Communication. *3 hours, 3 credits.* Theories, models, and research findings in communication in small-group interaction.

COM 769: Communication Acquisition. *3 hours, 3 credits.* Speech and language learning in the child; major theories and research findings on communication acquisition by the child.

COM 770: Seminar in Communication Theory and Research. *3 hours, 3 credits.* Special topics and issues in contemporary research and theory construction in communication.

COM 771: History and Development of Rhetorical Theory. *3 hours, 3 credits.* Contributions made to rhetorical theory by classical and medieval rhetoricians.

COM 772: Contemporary Rhetorical Theory. *3 hours, 3 credits.* Contributions made to rhetorical theory by British and American rhetoricians.

COM 775: Speech Criticism. *3 hours, 3 credits.* The bases of rhetorical criticism; application to selected speeches.

COM 790: Radio and Television in Society. *3 hours, 3 credits.* Analysis of the effects of broadcasting on the individual and society. The nature of the media and their relationship with government and other social institutions.

Languages and Literatures

Chair: Maria Grazia DiPaolo (Carman Hall, Room 257)
Adviser: Oscar Montero (Carman Hall, Room 279)
Department Faculty: Professors: Antoinette Blum, Maria Grazia DiPaolo, Ricardo R. Fernández, Maria Cristina Guiñazú, Oscar Montero, José Muñoz Millanes, Martín Oscar, Manfredi Piccolomini, Gerardo Piña-Rosales, Susana Reisz de Rivarola, Gary S. Schwartz, Thomas Spear; Associate Professor: Carmen Esteves; Assistant Professors: Daniel Fernandez, Maria del Carmen Saen de Casas, Zelda Newman; Lecturers: Asako Tochika, Lynne Van Voorhis

The Department of Languages and Literatures offers a Master of Arts in Spanish designed to meet the needs of students who wish to teach at the secondary-school level.

PROGRAM FOR SECONDARY SCHOOL TEACHERS OF SPANISH

Sequence 1: Spanish

Admission Requirements

- A bachelor's degree (or its equivalent) from an accredited college or university.
- Demonstrate the ability to successfully pursue graduate study. (Above-average academic achievement in general and in Spanish coursework is required.)
- Have completed 18 credits in advanced (300 level and above) undergraduate Spanish courses (including a minimum of 9 advanced credits in literature courses conducted in Spanish) plus 12 credits in secondary education courses and one semester of student teaching (or its equivalent). If these requirements are not met, additional undergraduate courses must be completed before admission to the program and after consultation with the Department of Languages and Literatures.
- If conditionally admitted, make up not more than 12 credits of specified undergraduate coursework, starting in the first semester and finishing in no more than three consecutive semesters.
- Two letters of recommendation.
- Report to the department for consultation with the adviser and assessment of Spanish language skills prior to matriculation.

Nonmatriculants

Nonmatriculants are also required to report to the Department of Languages and Literatures for assessment of skills prior to registration.

Degree Requirements

Sequence 1 (Spanish) requires a total of 30 credits distributed as follows: 24 credits in Spanish, including SPA 601, with a minimum of 3 credits in Peninsular literature and 3 credits in Spanish American literatures. 6 elective credits with the permission of the adviser.

All students in the program must pass a comprehensive examination

Sequence 2: Teaching Spanish

Admission Requirements

- A bachelor's degree (or its equivalent) from an accredited college or university.
- Demonstrate the ability to successfully pursue graduate study. (Above-average academic achievement in general and in Spanish coursework is required.)
- Have completed 24 credits in advanced (300 level and above) undergraduate Spanish courses (including a minimum of 12 advanced credits in literature courses conducted

in Spanish) plus 12 credits in secondary education courses and one semester of student teaching (or its equivalent). If these requirements are not met, additional undergraduate courses must be completed before admission to the program and after consultation with the Department of Languages and Literatures.

- Submit scores on the New York State Liberal Arts and Sciences Test (L.A.S.T.).
- If conditionally admitted, make up not more than 12 credits of specific undergraduate coursework, starting in the first semester and finishing in no more than three consecutive semesters.
- Two letters of recommendation.
- Report to the Department for consultation with the adviser and assessment of Spanish language skills prior to matriculation.
- Submit scores for the A.C.T.E.L. O.P.I. (Oral Proficiency Interview) prior to matriculation.

Additional requirements for Certification in Teaching Spanish 7-12:

In order to be recommended for Initial Certification in teaching Spanish 7-12, candidates in Sequence 2 must (a) have a bachelor's degree that meets New York State requirements for a core in the liberal arts and sciences; (b) present passing scores on the following New York State examinations: L.A.S.T., A.T.S.-W., and Content Specialty Test; and (c) meet any additional New York State requirements.

In order to qualify for Professional Certification in teaching Spanish 7-12, candidates in sequences 1-2 must have completed three years of full-time teaching in a public or private school that serves grades 7-12 and must meet any additional New York State requirements.

Nonmatriculants

Nonmatriculants are also required to report to the Department of Languages and Literatures for assessment of skills prior to registration.

Degree Requirements

Sequence 2 (Teaching Spanish) requires a total of 30-33 credits distributed as follows:

15 credits in Spanish, including SPA 601, with a minimum of 3 credits in Peninsular Literature, and 3 credits in Hispanic American literatures. 15-18 credits in Education, including ESC 501, ESC 502, ESC 524, ESC 562, plus ESC 595 (for teachers; 3 credits) or ESC 596 (for student teachers, 6 credits).

All students in the program must pass a comprehensive examination.

Sequence 3: Teaching Spanish—Transitional B

Admission Requirements

- A bachelor's degree (or its equivalent) from an accredited college or university.
- Demonstrate the ability to successfully pursue graduate study. (Above-average academic achievement in general and in Spanish coursework is required.)
- Have completed 24 credits in advanced (300 level and above) undergraduate Spanish courses (including a minimum of 12 advanced credits in literature courses conducted in Spanish) plus 12 credits in secondary education courses and one semester of student teaching (or its equivalent). If these requirements are not met, additional undergraduate courses must be completed before admission to the program and after consultation with the Department of Languages and Literatures.

- Submit scores on the New York State L.A.S.T.
- If conditionally admitted, make up not more than 12 credits of specific undergraduate coursework, starting in the first semester and finishing in no more than three consecutive semesters.
- Two letters of recommendation.
- Report to the Department for consultation with the adviser and assessment of Spanish language skills prior to matriculation.
- Submit scores for the A.C.T.F.L. O.P.I. (Oral Proficiency Interview) prior to matriculation.

Additional Requirements for Certification in Teaching Spanish 7-12

In order to be recommended for Initial Certification in teaching Spanish 7-12, candidates in Sequence 3 must (a) have a bachelor's degree that meets New York State requirements for a core in the liberal arts and sciences; (b) present passing scores on the following New York State examinations: L.A.S.T., A.T.S.-W., and Content Specialty Test; and (c) meet any additional New York State requirements.

In order to qualify for Professional Certification in teaching Spanish 7-12, candidates in sequences 1-2 must have completed three years of full-time teaching in a public or private school that serves grades 7-12 and must meet any additional New York State requirements.

Nonmatriculants

Nonmatriculants are also required to report to the Department of Languages and Literatures for assessment of skills prior to registration.

Degree Requirements

Sequence 3 (Teaching Spanish-Transitional B) requires a total of 30 credits distributed as follows:

15 credits in Spanish, including SPA 601, with a minimum of 3 credits in Peninsular Literature, and 3 credits in Hispanic American literatures. 15 credits in Education, including ESC 501 (3), 502 (3), 524 (3), 562 (3), 595 (3), 611 (0), and 612 (0).

All students in the program must pass a comprehensive examination.

COURSES IN SPANISH

SPA 601: Workshop in Spanish Grammar. 3 hours, 3 credits. (Open to qualified undergraduates with Departmental permission.) Grammatical analysis and selected readings dealing with the evolution of the Spanish language. Emphasis on syntax and lexical experience.

SPA 610: Hispanic Women Authors. 3 hours, 3 credits. (Open to qualified undergraduate students with Departmental permission.) Works of women writers from Spain and/or Spanish America.

SPA 701: Principles of Literary Analysis and Criticism. 3 hours, 3 credits. Critical approaches to the reading and understanding of literary texts.

SPA 711: Spanish Literature of the Middle Ages. 3 hours, 3 credits. Study of a medieval genre, a subgenre, or a literary topic. The selection may include epic and romance, ballads, "mester de clerecia and mester de juglaria," short fiction, courtly love, etc.

SPA 721: Spanish Poetry of the Golden Age. 3 hours, 3 credits. Study of the poetic traditions of the Renaissance and the Baroque.

SPA 722: The Spanish Novel of the Golden Age. 3 hours, 3 credits. Narrative prose of the Renaissance and the Baroque.

SPA 723: Spanish Drama of the Golden Age. 3 hours, 3 credits. The "Comedia": its antecedents and its major playwrights.

SPA 724: Cervantes. 3 hours, 3 credits. *Don Quixote* and the birth of the modern European novel, with attention to the many literary genres, narrative and lyric, that converge in the work.

SPA 731: Spanish Literature of the Nineteenth Century. 3 hours, 3 credits. Romanticism and Realism in Spain.

SPA 741: The Generations of 1898 and 1927. 3 hours, 3 credits. Selected works of representative authors from the turn of the century to the Spanish Civil War.

SPA 742: Spanish Literature after the Civil War. 3 hours, 3 credits. Selected works written in Spain and in exile after 1939.

SPA 743: Spanish Poetry of the Twentieth Century. 3 hours, 3 credits. This course will offer students extensive understanding of the poetry of twentieth-century Spain. Surrealism, the Generation of 27, the Generation of 36, the new poetry of the 70s, and the diverse currents of the end of the century will be presented in relation to political, social, and economic trends.

SPA 751: Colonial Spanish-American Literature. 3 hours, 3 credits. Prose and poetry from the discovery of America through 1800.

SPA 752: Spanish-American Literature of the Nineteenth Century. 3 hours, 3 credits. The study of topics, such as the wars of independence, national identity, slavery, and democracy, as manifested in literary texts.

SPA 753: "Modernismo" in Spanish America. 3 hours, 3 credits. The concept of modernity and Modernism in literary works.

SPA 754: Twentieth-Century Spanish-American Narrative. 3 hours, 3 credits. Tradition, innovation, and experimentation in the prose narrative of this century.

SPA 755: Twentieth-Century Spanish-American Poetry. 3 hours, 3 credits. Analysis of selected texts.

SPA 761: Topics in Hispanic Literatures. 3 hours, 3 credits. (Course may be repeated for credit.) Offerings vary from semester to semester.

SPA 771: Readings in Hispanic Literatures. 1-3 hours, 1-3 credits. Independent study of Peninsular and/or Spanish-American literary works, carried out by individual students under the guidance of Departmental faculty.

COURSES IN ROMANCE LANGUAGES

*Courses preceded by an asterisk are not expected to be offered in 2009-2011.

***RLG 701: Introduction to Romance Linguistics I (in English).** 3 hours, 3 credits. Comparative study of the evolution of French, Italian, and Spanish. Study of principles underlying the development of the Romance languages and present methods of analysis.

***RLG 702: Introduction to Romance Linguistics II (in English).** 3 hours, 3 credits. Continuation of RLG 701. Phonology and morphology of Old French, Old Italian, and Old Spanish, with their development through Vulgar Latin.

***RLG 705: Studies in Comparative Romance Literature I (in English).** 3 hours, 3 credits. The sources, nature, impact, and interdependence of the major literary currents in the various Romance literatures from the medieval period to the Renaissance.

***RLG 706: Studies in Comparative Romance Literature II (in English).** 3 hours, 3 credits. The sources, nature, impact, and interdependence of the major literary currents in the various Romance literatures from the Enlightenment to the modern era.

***RLG 741: Old French.** 3 hours, 3 credits. Study—descriptive and historical—of the grammar of Old French. Reading of selected poetry and prose texts.

COURSES IN ITALIAN

*Courses preceded by an asterisk are not expected to be offered in 2009-2011.

*ITA 712: **Dante's Vita Nuova and Inferno.** 3 hours, 3 credits. Study of Dante's lyrical and mystical period; the Inferno as seen against the historico-political, social, and intellectual background of medieval Florence.

*ITA 713: **The Purgatorio.** 3 hours, 3 credits. Intensive study of the *Purgatorio* background, symbols, poetical significance, and place in the development of Dante's art.

*ITA 714: **The Paradiso.** 3 hours, 3 credits. Dante's final ascent to the "Source of All Being"; theology and beauty; the contents, episodes, and lyrical and mystical consummation of the comedy's Third Cantica.

*ITA 715: **The Poetry and Humanism of Petrarch.** 3 hours, 3 credits. "Canzoniere," "Trionfi," the "Secretum," "De Viris Illustribus," and the "Correspondence."

*ITA 716: **Boccaccio and the Italian Novella.** 3 hours, 3 credits. Study of the genre and its development (novellino, Boccaccio, Sacchetti, Da Porto, Bandello, and Giraldi Cinthio through the contemporaries Soldati, Calvino, Moravia, Buzzati, and others).

*ITA 720: **Italian Literature of the Fifteenth Century.** 3 hours, 3 credits. The development of humanism: Valla, Alberti, Pico della Mirandola, Ficino, and others. Also the poets Lorenzo il Magnifico and Poliziano.

*ITA 721: **The Renaissance.** 3 hours, 3 credits. The Reformation. The moralists Bembo, Castiglione (*Cortegiano*), Guicciardini (*Ricordi Politici e Civili*), and Della Casa (*Galateo*). The chivalric poem (Ariosto's *Orlando Furioso*); Aretino.

*ITA 722: **Machiavelli: Historian, Epistolographer, Playwright, and Political Thinker.** 3 hours, 3 credits. Study of the *Istorie Fiorentine*, the Correspondence, *Mandragola*, *Il Principe*, and the *Discorsi*.

*ITA 723: **Italian Literature of the Seventeenth and Eighteenth Centuries.** 3 hours, 3 credits. Study of the works of Bruno, Campanella, Marino, Galileo, Vico, and Parini.

*ITA 724: **The Italian Epic and Chivalric Poetry.** 3 hours, 3 credits. Evolution of the genre. Epic theories of the Renaissance (Castelvetro, Scaligero, Mazzoni, Tasso, and Trissino). Tasso's *Gerusalemme Liberata*.

*ITA 741: **The Commedia dell'Arte and the Theatre in the Seventeenth and Eighteenth Centuries.** 3 hours, 3 credits. Metastasio, Gozzi, Goldoni, and Alfieri.

*ITA 752: **The Novel in the Nineteenth Century.** 3 hours, 3 credits. The "Romanzo storico, psicologico, nazionalista e verista." Manzoni, the Romantics, and Verga.

*ITA 753: **Romantic and Post-Romantic Literary Currents.** 3 hours, 3 credits. Poetic trends and literary criticism through the works of Foscolo, Manzoni, Leopardi, and Carducci.

*ITA 754: **Modern Italian Poetry.** 3 hours, 3 credits. Critical analysis of the poetry of Pascoli and D'Annunzio. Experimentation and achievement of the twentieth century (Saba, Ungaretti, Montale, and Quasimodo).

*ITA 761: **Italian Philosophy and Literary Criticism since 1870.** 3 hours, 3 credits. De Sanctis, Settembrini, Croce, Gentile, Serra, Barbi, Momigliano, L. Russo, and Flora.

*ITA 762: **The Italian Novel from 1920 to the Present.** 3 hours, 3 credits. The "Vociani," "Futuristi," and "Rondisti" (Palazzeschi, Bacchelli, and Buzzati). The "Solariani" and the "Neo-Realisti" (Gadda, Pratolini, Vittorini, and Pavese).

*ITA 763: **The Modern Italian Theatre.** 3 hours, 3 credits. The outstanding playwrights of the twentieth century from D'Annunzio and Pirandello to Niccodemi, Betti, and Fabbri.

COURSES IN CLASSICS

*Courses preceded by an asterisk are not expected to be offered in 2009-2011.

*CLA 611: **Synthesis of Classical Culture.** 3 hours, 3 credits. Rapid survey of the culture of Greece and Rome, designed to enable students to effect a correlation of classical literature and art with their historical background. The course includes visits to the Metropolitan Museum of Art. Each student is required to make a special study of one important literary genre in its development through Greek and Latin literature.

*CLA 630: **Greek and Roman Tragedy in English Translation.** 3 hours, 3 credits. Study of Greek tragedy against the background of its times, with some consideration of the validity of Aristotelian critical standards and of the Roman tragedy of Seneca the Younger as an important link between Greek tragedy and the drama of the Renaissance.

*CLA 640: **Greek and Roman Comedy in English Translation.** 3 hours, 3 credits. Study of the form and contemporary relevance of ancient comedy as seen through the plays of Aristophanes, Menander, Plautus, and Terence, with primary attention to its evolution and importance for later manifestations of the comic spirit in literature.

Latin American and Puerto Rican Studies

Department Chair: Milagros Ricourt

Department Faculty: Professors: Laird Bergad, Forrest Colburn; Associate Professors: David A. Badillo, Licia Fiol-Matta, Milagros Ricourt; Assistant Professors: Alyshia Gálvez, Teresita Levy, Kathleen Lopez; Lecturers: Anna Lervold, Xavier Totti

The Department of Latin American and Puerto Rican Studies offers courses designed to meet the needs of: (1) qualified students who wish to take individual courses, (2) students who seek graduate credit in the field of Latin American and Puerto Rican Studies, and (3) those who are teachers in bilingual programs (Spanish-English) and wish to study the history and culture of Latin America and Puerto Rico.

* COURSES IN PUERTO RICAN STUDIES

*Courses preceded by an asterisk are not expected to be offered in 2009-2011.

*PRS 500: **Seminar on the Cultural History of Puerto Rico I.** 3 hours, 3 credits. The cultural history of Puerto Rico, with special emphasis on the period 1800-1898.

*PRS 501: **Seminar on the Cultural History of Puerto Rico II.** 3 hours, 3 credits. The cultural history of Puerto Rico, with special emphasis on the period from 1898 to the present.

*PRS (ANT) 550: **A Comparative Study of Puerto Rican Culture.** 3 hours, 3 credits. Ethnographic analysis of modern communities in Puerto Rico and the effects of urbanization, industrialization, and tourism. Comparative analysis of Puerto Rican culture in New York, and evaluation of the educational process within each of the two cultures.

Mathematics and Computer Science

*Chair: Robert Feinerman (Gillet Hall, Room 211).
Adviser: Charles Berger (Gillet Hall, Room 101A; 718-960-8868)
Department Faculty and Staff: Distinguished Professors: Adam Koranyi and Victor Pan; Professors: Charles Berger, Robert Feinerman, Melvin Fitting, Nancy Griffeth, Michael Handel, Nicholas Hanges, Leon Karp, Linda Keen, Nikola Lakic, Joseph Lewittes, Richard Mosak, Melvyn B. Nathanson, Robert Schneider, Zoltan Szabo; Associate Professors: Yves Jean, Guang Jung, John C. Mineka, Christina Sormani, Katherine St. John; Assistant Professors: Jason Behrstock, Laurentiu Maxim, Roman Muchnik, Brian Murphy, Robert Scheinerman; Lecturers: Rhys Rosholt, David J. Rothchild; Director of Mathematics Laboratory and Computer Services: Robert Sutliff; Systems and Network Administrator: Etina Bueno*

The Department of Mathematics and Computer Science offers the following graduate degree programs: Master of Science in Computer Science, Master of Arts in Mathematics, and Master of Arts for Secondary School Teachers of Mathematics. The Department also offers courses in the program in Mathematics Education for Intermediate School Teachers, which is administered by the Department of Middle and High School Education.

M.S. PROGRAM IN COMPUTER SCIENCE

The Computer Science program is offered for (a) recent graduates who wish to continue their studies while beginning their professional careers; (b) individuals presently employed in computer-related fields who wish to qualify for advanced career opportunities or training; and (c) individuals who seek a career change.

Admission Requirements

- Bachelor's degree (or its equivalent) from an accredited college or university.
- Demonstrate the potential to successfully pursue graduate study by having attained a minimum undergraduate grade average of B in the field selected for the graduate major and a minimum grade average of B- in the undergraduate record as a whole.
- Have taken the following courses: two semesters of calculus, one semester of linear algebra, two semesters of programming in high-level languages, one semester of programming in assembly language, and one semester in data structures. Admission may be granted with the provision that undergraduate courses will be taken to satisfy these course requirements.
- Two letters of recommendation.
- If conditionally admitted, satisfy the conditions within one year.

Degree Requirements

Students must complete the following requirements for the M.S. Program in Computer Science:

- A program of 36 credits (nine courses), chosen with permission of the Graduate Adviser. The following courses are required of all students: CMP 761, 692, and 697. The remaining six courses must be chosen from among all CMP courses numbered 683 and above.
- A master's thesis or a written comprehensive examination. The thesis option is subject to approval of the Graduate Adviser.

M.A. PROGRAM IN MATHEMATICS

The Master of Arts Program in Mathematics is offered for (a) students who may eventually work toward a doctorate in mathematics; (b) those who seek the M.A. as a terminal degree; (c) graduates of the M.A. Program for Secondary School Teachers of Mathematics seeking additional graduate mathematics credits and who wish the structure of a formal degree program and the credential of a pure mathematics master's degree; (d) qualified students who wish to take individual graduate mathematics courses.

Admission Requirements

- Have a bachelor's degree or its equivalent from an accredited college or university.
- Demonstrate the potential to successfully pursue graduate study by having attained a minimum undergraduate grade average of B in mathematics courses and a B- in the undergraduate record as a whole. Alternatively, graduation from the Lehman Teachers Master's in Mathematics program or an equivalent master's degree with a B cumulative average may replace undergraduate grade requirements.
- Have completed at least 12 credits in mathematics beyond calculus, including courses in advanced calculus, linear algebra, and modern algebra. (Students with fewer than 12 credits or lacking specific courses may be considered for conditional admission; however, any student admitted must be sufficiently advanced to take at least one course in the program the first semester of matriculation.)
- Submit two letters of recommendation and a personal statement explaining your career plans.
- If conditionally admitted, satisfy the conditions within one year. This can include taking undergraduate courses to satisfy the admission criteria.

Degree Requirements

The requirements for the M.A. Degree in Mathematics are as follows:

- A program of 30 credits of courses, chosen with the permission of the Graduate Adviser. Students should include in their combined current graduate and prior academic career the following courses: (a) MAT 751: Theory of Functions of a Real Variable, (b) MAT 753: Theory of Functions of a Complex Variable I, (c) MAT 616: Algebra.
- At least 18 of the credits must be taken as a matriculated student at Lehman. Students considering going on to a mathematics doctorate are encouraged to take some of their final credits in the CUNY Graduate Center Ph.D. Program in Mathematics.
- A written comprehensive examination is required. The exam shall cover the three courses prescribed above.
- Students are required to maintain a cumulative B average to stay in good standing, and must have an overall B average to graduate. Two consecutive semesters in attendance out of good standing is cause for dismissal.

MAT 582, 601, 602, 603, 604, and 615 may not be used toward this degree.

M.A. PROGRAM FOR SECONDARY SCHOOL TEACHERS OF MATHEMATICS

The Department of Mathematics and Computer Science offers courses designed to meet the needs of students in the Program for Secondary School Teachers of Mathematics.

Admission Requirements

- Bachelor's degree (or its equivalent) from an accredited college or university.
- Demonstrate the ability to successfully pursue graduate study. (Above-average academic achievement in general and in the teaching specialization is required.)
- Have completed the appropriate number of credits in approved courses in the relevant academic specialization, plus 12 credits in secondary education courses and one semester of student teaching (or its equivalent).

- Satisfy appropriate voice, speech, and health standards.
- If conditionally admitted, make up not more than 12 credits of specified undergraduate course work, starting in the first semester and finishing in no more than three consecutive semesters.
- Two letters of recommendation.

Degree Requirements

Students in this program are required to complete from 21 to 24 credits in mathematics, as well as 6 to 9 credits in middle and high school education. Candidates for the degree are required to pass a comprehensive examination based on four courses, including at least one course each in algebra, analysis, and geometry.

COURSES IN MATHEMATICS EDUCATION

MAT 601: Secondary School Mathematics from an Advanced Standpoint. 3 hours, 3 credits. This course will cover topics chosen from the theory of arithmetic, logic, probability, and geometry that are of particular interest to teachers of secondary school mathematics. PREREQ: Two semesters of calculus.

MAT 602: Introduction to Number Theory and Modern Algebra I. 3 hours, 3 credits. Topics from number theory that have special relevance to the intermediate school program will be considered. These include prime numbers, unique factorization, congruences, Diophantine equations, and Fermat's theorem. Abstract algebra, including equivalence relations and some group theory, will be interwoven in the development, but the primary emphasis is on the number systems that could be considered in the intermediate schools. PREREQ: Two semesters of calculus.

MAT 603: Introduction to Number Theory and Modern Algebra II. 3 hours, 3 credits. Further study of the topics in MAT 602. Also, rational numbers, rings, integral domains, fields, ordered fields. PREREQ: MAT 602.

MAT 604: Application of the Real and Complex Number Systems. 3 hours, 3 credits. A study of irrational numbers, the algebraic properties of the complex numbers and polynomials over the integers, rationals, and reals through a concrete, nonabstract approach. Applications in the theory of equations and inequalities. PREREQ: Two semesters of calculus.

COURSES IN MATHEMATICS

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

MAT 582: Statistics for Students in Biological, Health, and Social Sciences. 4 hours, 4 credits. (Open to all graduate students except those in the education or M.A. programs in graduate mathematics.) Topics in statistics, with emphasis on needs of students in fields other than mathematics. The topics will include methods of central tendency and variability, probability theory, sampling, normal distribution, and large sample theory, t-test and small sample theory, chisquare test, correlation and regression, analysis of variance, and nonparametric methods. Statistical analysis using a computer package.

MAT 613: Theory of Numbers. 4 hours, 4 credits. Euclid's algorithm and the fundamental theorems on divisibility; prime numbers and congruences; the theorems of Fermat, Euler, and Wilson; quadratic residues and reciprocity law, algebraic numbers, Pythagorean triples, other diophantine equations, Fermat's Last Theorem, Pell's equation and continued fractions, the distribution of prime numbers, and advanced topics. PREREQ: Three semesters of calculus or a course in Modern Algebra.

MAT 615: Modern Algebra. 4 hours, 4 credits. Mathematical induction. Introduction to group theory with examples-permutation groups, general linear group. Homomorphisms, subgroups, and congruences. Introduction to theory of rings and fields. Applications to number systems and number theory. PREREQ: A course in Linear Algebra.

***MAT 616: Algebra.** 4 hours, 4 credits. Group theory, including finitely generated Abelian groups, Sylow's theorem(s), simple groups, solvable groups. Ring theory, including integral domains, Euclidean rings. Field theory, including finite field extensions, Galois theory. PREREQ: One course in modern algebra.

MAT 630: Advanced Euclidean Geometry. 4 hours, 4 credits. Elementary Geometry from an advanced standpoint. Euclidean Geometry topics through the modern era. Solid Euclidean geometry, conics, and a modern perspective. PREREQ: A course in linear algebra.

MAT 634: Transformation Geometry. 4 hours, 4 credits. Geometry as the study of properties deduced from a set of axioms. Brief introduction to non-Euclidean geometries, synthetic projective geometry. Geometry as the study of invariants of a transformation group: analytic projective geometry and its sub-geometries. Methods from complex analysis, including linear fractional transformations and the Riemann sphere. PREREQ: Elements of linear algebra.

MAT 636: Non-Euclidean Geometries. 4 hours, 4 credits. Hyperbolic and elliptic geometry, with some trigonometry and calculus; circular models of the hyperbolic and elliptic planes; surfaces of constant curvature; and historical background of attempts to prove Euclid's parallel postulate. Spherical Geometry and Great Circles. PREREQ: A course in linear algebra.

MAT 637: Topics in Discrete Mathematics. 60 hours, 4 credits. Topics chosen from probability, combinatorics, decision making, game theory, graph theory, recurrence relations, linear programming, statistical inference. Problem solving using mathematical modeling. PREREQ: Two semesters of calculus.

MAT 640: Topology and Analysis I. 3 hours, 3 credits. (May not be taken for credit by noneducation students.) Basic topics in continuity, compactness, and connectedness. Applications to simply stated but not trivial topological problems related to the geometry of mappings of segments, curves, circles, and disks. PREREQ: One semester of advanced calculus or instructor's permission.

***MAT 641: Topology and Analysis II.** 3 hours, 3 credits. (May not be taken for credit by noneducation students.) Continuation of the study of continuity, compactness, and connectedness with applications to n-dimensional Euclidean space. PREREQ: MAT 640 (Topology and Analysis I).

MAT 655: Exploring Mathematics Using Technology. 3 hours (15, lecture; 30, lab), 2 credits. Use of tools of technology (such as Computer Algebra systems and graphing calculators) to explore ideas, concepts, and techniques in various areas of mathematics, such as calculus and probability. PREREQ: Two semesters of calculus.

MAT 661: History of Mathematics. 4 hours, 4 credits. Historical development of mathematics through the calculus. The mathematics of Babylonian, Egyptian, Hindu, Greek, Arabic, Inca, and Chinese civilizations; some modern developments; contributions of diverse cultures; applications to secondary school teaching. PREREQ: A course in linear algebra.

MAT 670: Foundations of Mathematics. 3 hours, 3 credits. Sets, logic, nature of mathematical proof, and number systems. PREREQ: Three semesters of calculus or a course in modern algebra.

MAT 681: Probability. 4 hours, 4 credits. Probability models, combinatorial problems, random variables, expectation and variance, binomial, normal and Poisson variables, law of large numbers, central-limit theorem, markov chains, and selected additional topics. PREREQ: Two semesters of calculus.

MAT 711: Topics in Algebra. 4 hours, 4 credits. Topics chosen from semigroups with operators, homomorphisms, ring and field extensions, modules and ideals, right and left vector spaces over division rings, linear transformations, and rings of linear transformations, Galois theory, matrix groups, nilpotent groups, centers, exponential maps, Lie algebras. PREREQ: One course each in linear and modern algebra.

***MAT 715: Advanced Linear Algebra.** 4 hours, 4 credits. Vector spaces, linear transformations, bilinear quadratic forms, tensors, forms and wedge products, finite and infinite dimensional linear algebra, eigenvalues, eigenvectors, introduction to Hilbert Spaces and eigenfunctions, all studied from an abstract, proof-oriented approach. PREREQ: One course in linear algebra.

***MAT 719: Special Topics in Algebra.** 3 hours, 3 credits. (May be reelected for credit as often as the topic changes.)

***MAT 733: Differential Geometry.** 4 hours, 4 credits. Curves in E^3 , curvature, torsion, fundamental existence theorem for space curves, geometry of a surface, inverse and implicit function theorems, Gauss curvature, and Minimal Surfaces. PREREQ: One course each in advanced calculus and linear algebra.

MAT 734: Calculus on Manifolds. 4 hours, 4 credits. Inverse and Implicit Function Theorems, Manifolds, Differential Forms, Fubini's Theorem, Partition of Unity, Integration on Chains, Stokes' and Green's Theorems, and an introduction to Riemannian geometry. PREREQ: One course each in linear algebra and advanced calculus.

***MAT 739: Special Topics in Geometry.** 3 hours, 3 credits. (May be reelected for credit as often as the topic changes.)

***MAT 741: Topology.** 4 hours, 4 credits. Sets, functions, metric spaces, topological spaces, neighborhoods, continuity, homeomorphisms, connectedness, compactness, homotopy, fundamental group, universal covers, Invariance of Domain Theorem. PREREQ: One course each in modern algebra and advanced calculus.

***MAT 742: General Topology.** 3 hours, 3 credits. Topological spaces, continuous functions, separation, properties, induced topological structures, compactness, and metrization. PREREQ: MAT 741 (Topology) or equivalent.

***MAT 743: Algebraic Topology.** 3 hours, 3 credits. Homology theory, complexes, and homotopy. Fixed-point theorems. PREREQ: MAT 741 (Topology) or equivalent, plus one course in modern algebra.

MAT 751: Theory of Functions of a Real Variable. 4 hours, 4 credits. Real number system, metric and Banach spaces; applications; the Lebesgue integral; measurable sets and functions; L_p spaces and Hilbert spaces; measure spaces and Daniell integral; Riemann-Stieltjes integral; Radon-Nikodym theorem; and Stone-Weierstrass theorem. PREREQ: A one-semester course in advanced calculus.

MAT 753: Theory of Functions of a Complex Variable I. 4 hours, 4 credits. Algebra and geometry of complex numbers, analytic functions, Taylor and Laurent Series, Abel's Limit Theorem, meromorphic functions, residue calculus, Cauchy integral theorem and applications, classification of functions by singularities, analytic continuation, linear transformations, the cross ratio, conformal mapping, the Riemann Sphere. PREREQ: One semester of advanced calculus.

***MAT 754: Theory of Functions of a Complex Variable II.** 3 hours, 3 credits. Selected topics in the theory of functions of a complex variable. PREREQ: One first course in complex variables.

MAT 755: Ordinary Differential Equations. 4 hours, 4 credits. First Order, Second Order, and Higher Order Linear Equations, Series Solutions, the Laplace Transform, Systems of First Order Linear Equations, Numerical Methods, Nonlinear Differential Equations and Stability, Existence and Uniqueness Theorems. PREREQ: One course each in linear algebra and advanced calculus.

MAT 756: Partial Differential Equations. 4 hours, 4 credits. First order equations and characteristics, Laplace's Equation, Green's functions, Heat Equation and Fundamental Solutions, Wave Equation and Domains of Dependence and Influence, Wave Propagation, Elliptic, Hyperbolic, and Parabolic Equations, Maximum Principal, Existence and Uniqueness. PREREQ: One course each in linear algebra and advanced calculus.

MAT 759: Special Topics in Analysis. 3 hours, 3 credits. (May be reelected for credit as often as the topic changes.)

MAT 771: Mathematical Logic I. 4 hours, 4 credits. Development of the propositional calculus and the predicate calculus, with special emphasis on their mathematical aspects and applications. Semantics, axiom systems, and tableau systems will be presented, and Godel's completeness theorem will be proven. Further topics will be selected from computer implementation, model theory, and incompleteness/undecidability. PREREQ: One course in either modern algebra or set theory.

***MAT 772: Mathematical Logic II.** 3 hours, 3 credits. Advanced topics in computability, first order theories, higher-order logics, semantics, model theory, set theory, analytic methods in proof theory, Gentzen systems, and cut elimination. PREREQ: MAT 771 (Mathematical Logic I).

MAT 775: Set Theory. 4 hours, 4 credits. Axiomatic approach to the theory of sets. Relations, functions, the axiom of choice, ordinal numbers, well-ordering, Zorn's lemma, cardinal numbers and transfinite arithmetic, transfinite induction. PREREQ: Any two courses chosen from linear algebra, modern algebra, or advanced calculus.

MAT 782: Mathematical Statistics. 4 hours, 4 credits. Fundamental concepts of statistics. Point estimation, maximum likelihood estimators, hypothesis testing, confidence regions, t-test, analysis of variance, non-parametric tests, chi-square goodness-of-fit tests, correlation, regression analysis, and selected additional topics. PREREQ: A course in probability.

***MAT 785: Introduction to Applied Mathematics.** 3 hours, 3 credits. Sets of orthogonal functions; Bessel's inequality, Parseval's theorem; Fourier series, convergence criteria; the Fourier integral; Laplace's equation, Bessel functions, Legendre functions, spherical harmonics; and calculus of variations. PREREQ: One course in advanced calculus.

***MAT 786: Computer Applications to Mathematics and Science I.** 4 hours, including lab, 3 credits. Rapid introduction to high-level language, such as Fortran or PL/1. Use of scientific packages discussed. Projects on the College computer of a moderately advanced nature in scientific and mathematical fields will be tailored for the students. Some efficient techniques for these projects taught. PREREQ: Three courses in calculus or instructor's permission.

***MAT 787: Computer Applications to Mathematics and Science II.** 4 hours, including lab, 3 credits. Study of areas where time and storage limitations are imposed on the programmer. Uses of trees and heaps in sorting, and data organization discussed. Off-line and on-line algorithms compared and investigated as to time versus space considerations. Optimization of mathematical calculations and methods, such as graph theory, fast arithmetic, and matrix manipulation presented. Students of the class shall determine more specific topics on the College computer. PREREQ: MAT 786 or instructor's permission.

MAT 789: Special Topics in Applied Mathematics. 3 hours, 3 credits. (May be reelected for credit as often as the topic changes.)

COURSES IN COMPUTER SCIENCE

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

***CMP 605: BASIC and Computer-Assisted Instruction.** 3-4 hours, 3-4 credits. Introduction to programming in BASIC on a microcomputer. Standard methods of computer-assisted instruction: drills, tests, tutorials, and demonstrations. Management topics, such as scorekeeping and record-keeping. Examples will be taken from a cross-section of disciplines. PREREQ: This course is intended for teachers with little or no programming background. No particular math background is required. *Note: Students taking this course for 4 credits will be required to do an extra major project.*

***CMP 607: LOGO and Computer-Assisted Instruction.** 3-4 hours, 3-4 credits. Introduction to programming in LOGO on a microcomputer. LOGO graphics techniques. Standard methods of computer-assisted instruction: drills, tests, tutorials, and demonstrations. Discovery approach to geometry. PREREQ: This course is intended for teachers with little or no programming background. No particular math background is required. *Note: Students taking this course for 4 credits will be required to do an extra major project.*

***CMP 609: Programming in Pascal.** 4 hours, 4 credits. An intensive introductory course in structured programming using the language Pascal on microcomputers. This course is intended for people wishing to teach Pascal at the high school level.

CMP 683: Numerical Analysis. 4 hours, 4 credits. Topics in numerical analysis chosen from number systems, error analysis, linear equations and matrices, differentiation and integration, nonlinear equations, interpolation and approximation, and ordinary and partial differential equations. PREREQ: linear algebra and one year of programming.

CMP 685: Computability Theory. 4 hours, 4 credits. Mathematical formulation of computability theory and abstract machine theory. Finite-state machines and Turing machines; Church's Thesis; recursive functions and recursively enumerable sets; unsolvability and the halting problem.

CMP 692: Programming Languages. 4 hours, 4 credits. A study of programming languages from abstract and concrete points of view. Syntax, semantics; data objects and typing; control structures; scope of names; storage classes; binding times; parameter passing, value, reference, name, value-replace; and procedures, side-effects, recursion, serial reusability, reentrancy. PREREQ: Assembly Language Programming.

CMP 695: Survey of Computer Hardware. 4 hours, 4 credits. A survey of currently available computer equipment, together with some historical context. CPU's, microcomputers, minicomputers, large computers, super computers. Computer architecture, hierarchical storage, virtual storage and relocation, caches. Peripheral devices, storage systems, I/O channels. Communication hardware.

CMP 697: Operating Systems. 4 hours, 4 credits. A study of the functions and implementation of operating systems for various sizes and types of computers. Processor, storage, and device management. Paging algorithms, thrashing. File systems, concurrency, deadlocking, semaphores, and synchronization. PREREQ: Assembly Language Programming.

CMP 717: Video Game Programming. 4 hours, 4 credits. General game architecture, asynchronous input, animated sprites, action-oriented A.I., collision detection, scrolling, sound clips, 3D graphics. Student projects involving development of several video games, both individually and in teams. PREREQ: CMP 338 and a strong foundation in object-oriented programming techniques. PREREQ/COREQ: MAT 226 or its equivalent. *NOTE: Students should expect to devote a great deal of time working both individually and in teams to produce several video games written in Java. This is a "Programming Intensive" course.*

CMP 731: Systems Analysis and Design. 4 hours, 4 credits. Examination of the stages of a computer system life cycle with a structured approach: problem definition, feasibility study, analysis, design, implementation, and maintenance. Techniques employed include data flow diagrams, data dictionaries, system flowcharts, cost/benefit analysis, decision tables, Warnier/Orr diagrams, HIPO charts, PERT, and the critical path method.

CMP 736: Introduction to Enterprise Computing. 4 hours, 4 credits. Technical issues and principles for building distributed enterprise systems. Applications of these principles using the Java EE framework: server-side distributed component models, such as Enterprise Java Beans and Web Services. PREREQ: CMP 338 and proficiency in Java.

CMP 737: Software Engineering. 4 hours, 4 credits. Structured coding techniques and coding style will be considered: single entry-single exit constructs, modularity (coupling, cohesion), data encapsulation, data abstraction, generic facilities, and type checking. Verification, validation, and testing techniques will be studied: static analysis, unit testing, input-output assertions, weakest precondition, structured induction, and symbolic execution.

CMP 738: Communicating Robots. 4 hours, 4 credits. Techniques and principles for building communicating robots; programming on resource-limited systems, designing communications protocols, and testing distributed algorithms. Project to involve building a robot to work/compete with other robots. PREREQ: CMP 338 or its equivalent.

CMP 743: Principles of Communications Networks. 4 hours, 4 credits. Digital and analog communication, system architectures, and connection-oriented and connectionless service. The OSI model as a conceptual framework, and actual communication models and their protocols. Selected contemporary topics, such as communications security and the World Wide Web. PREREQ: A course in operating systems.

CMP 747: Linear Programming and Operations Research. 4 hours, 4 credits. Theory and application of linear techniques. Convex sets and polyhedrons. The simplex method and the revised simplex method. Procedures to handle degeneracy. Duality theory and the dual simplex method. Elements of inventory and queueing theory. Industrial applications in scheduling and production control. Khachian's algorithm. PREREQ: One course in linear algebra.

CMP 758: Data-Base Systems. 4 hours, 4 credits. Introduction to use and design of database systems. Topics include levels of extraction and views of data; data models, entity relationship, hierarchical, network, and relational data organization; data dependencies, normal forms; design algorithms; distributed databases; query languages.

CMP 761: Analysis of Algorithms. 4 hours, 4 credits. Techniques for the design and comparison of algorithms. Several models of computation will be considered. Topics chosen from: searching and sorting algorithms, algorithms on graphs, products involving polynomials and matrices, arithmetic complexity, fast Fourier transform, and NP-complete problems. PREREQ: A course in linear algebra and a course in data structures.

CMP 762: Automata Theory. 4 hours, 4 credits. Finite automata and related devices, the Chomsky hierarchy of formal grammars, equivalence of generative grammar characterizations of languages with recognition by restricted classes of machines, normal forms, computational complexity, intractable problems.

CMP 765: Artificial Intelligence. 4 hours, 4 credits. Topics in artificial intelligence from the areas of problem solving, pattern recognition, speech recognition, and natural language processing. Representations and search methods in artificial intelligence. Computer implementation. PREREQ: A course in data structures.

CMP 767: Computer Graphics. 4 hours, 4 credits. Theory and applications of computer graphics. Graphics devices, line and circle drawing algorithms, two-dimensional transformations, clipping and windowing, interactive devices such as light pens and graphics tablets, three-dimensional graphics. PREREQ: A course in linear algebra and one year of programming in a high-level language.

CMP 768: Simulation and Modeling. 4 hours, 4 credits. An introduction to continuous and discrete simulation. System modeling, probabilistic methods, simulation languages. Simulation examples from science, industry, and computer systems. PREREQ: One course in data structures.

CMP 770: Compiler Construction. 4 hours, 4 credits. Modern techniques of compiler design and construction. Topics from Lexical analysis, preprocessing. Grammars and their specifications, parsing techniques. General considerations about

top-down and bottom-up parsers. Recursive descent, predictive parsing. LALR (1) grammars and parsers. Error recovery. Intermediate languages and intermediate code generation. Optimization techniques, flow analysis, value numbering, constant propagation, linear test replacement, hoisting, dead-code elimination. Storage mapping, register coloring, spilling. Code generation. PREREQ: Data structures.

CMP 773: Image Processing. 4 hours, 4 credits. Image representation and display. Histograms, point, algebraic, and geometric operations on the image. Image compression. Edge detection. Measurement and classification of images. An introduction to three-dimensional image processing. PREREQ: A course in linear algebra.

CMP 774: E-commerce Technologies. 4 hours, 4 credits. Advanced Java enabling technologies for developing distributed Ecommerce applications. Topics to include: Introduction to J2EE, Remote Method Invocations (R.M.I.), Java Server Page (J.S.P.), Servlet, Java Database Connectivity (J.D.B.C.), Java A.P.I.'s and tools for X.M.L. and X.S.L.T., Design Patterns and Architectural issues, and Case Studies. Discussion of Web services, including Simple Object Access Protocol (S.O.A.P.), Web Service Definition Language (W.S.D.L.), and Universal Description Discovery and Integration (U.D.D.I.), as well as building Web services based on the advanced Java technologies. PREREQ: Object-Oriented Programming.

CMP 775: Combinatorial and Graph Algorithms. 4 hours, 4 credits. A study of some elementary and advanced combinatorial and graph algorithms, including dynamic programming, greedy methods, spanning and transversing graphs, shortest paths, maximum flow, matching and convex hulls. PREREQ: Course in data structures.

CMP 776: Parallel Algorithms and Architecture. 4 hours, 4 credits. Survey of parallel computer architecture and models of parallel computation. Design of parallel algorithms. Examples of specific parallel algorithms for searching and sorting and for numerical, algebraic, and combinatorial computations. PREREQ: A course in data structures.

CMP 788: Topics in Computer Science. 4 hours, 4 credits. (May be reelected for credit as the topic changes.) Advanced, in-depth studies of specialized topics of current interests in computer science. PREREQ: Dependent on topic (see instructor).

INDEPENDENT STUDY IN COMPUTER SCIENCE

CMP 793: Independent Study. 1 hour, 1 credit (may be repeated up to a maximum of 3 credits). Program of individual study of various topics in computer science, under the guidance and supervision of a member of the Department. PREREQ: Graduate Advisor's permission.

CMP 798: Independent Study in Computer Science. 4 hours, 4 credits. (May be reelected for credit with Graduate Advisor's permission.) Program of individual study of various topics in Computer Science, under the guidance and supervision of a member of the Department. PREREQ: Graduate Advisor's written permission.

CMP 799: Master's Thesis Research. 4 hours, 4 credits. Preparation for the M.S. thesis under the guidance of a faculty thesis adviser. PREREQ: Permission of a faculty thesis adviser and the Graduate Adviser.

SEMINAR AND INDEPENDENT STUDY COURSES IN MATHEMATICS

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

***MAT 792: Seminar.** 3 hours, 3 credits. (To be taken in the final semester of the M.A. program.) Designed to give candidates for the M.A. an introduction to the methods and literature of mathematical research.

MAT 793: Independent Study. 1 credit. (May be reelected for credit with the Graduate Adviser's permission.) Planned program of individual study of various topics in mathematics, under the guidance and supervision of a member of the Department. PREREQ: Graduate Adviser's written permission.

MAT 794: Independent Study. 1 credit. (May be reelected for credit with the Graduate Adviser's permission.) Planned program of individual study of topics in mathematics, under the guidance and supervision of a member of the Department. PREREQ: Adviser's written permission.

MAT 795: Independent Study. 2 credits. (May be reelected for credit with Graduate Adviser's permission.) Planned program of individual study of topics in mathematics, under the guidance and supervision of a member of the Department. PREREQ: Adviser's written permission.

MAT 796: Independent Study. 2 credits. (May be reelected for credit with Graduate Adviser's permission.) Planned program of individual study of various topics in mathematics, under the guidance and supervision of a member of the Department. PREREQ: Adviser's written permission.

MAT 797: Independent Study. 3 credits. (May be reelected for credit with Graduate Adviser's permission.) Planned program of individual study of various topics in mathematics, under the guidance and supervision of a member of the Department. PREREQ: Graduate Adviser's permission.

MAT 798: Independent Study. 3 credits. (May be reelected for credit with Graduate Adviser's permission.) Planned program of individual study of various topics in mathematics, under the guidance and supervision of a member of the Department. PREREQ: Graduate adviser's permission.

Middle and High School Education

Chair: Joye Smith (Carman Hall, Room B29)

Department Faculty: Professors: Herminio Martinez, Stanley F. Taback; Associate Professors: Russell P. Bradshaw, Serigne M. Gningue; Assistant Professors: Gillian Bayne, Cecelia Cutler, Margo Dellicarpini, David Fletcher, Amanda Gulla, Immaculee Harushimana, Angela Kelly, Wesley Pitts, Jessica Shiller, Joye Smith; Substitute Assistant Professors: Jennifer Marien, Luis Reyes; Instructor: David Hyman. Coordinators (Carman Hall, Room B29): Jessica Shiller, Social Studies Education; Gillian Bayne, Angela Kelly, and Wesley Pitts, Science Education; David Fletcher, Undergraduate Coordinator; Amanda Gulla and David Hyman, English Education; Immaculee Harushimana, Foreign Language Education; Margo Dellicarpini and Joye Smith, Bilingual Education and Teaching English to Speakers of Other Languages (T.E.S.O.L.); Serigne Gningue and Stanley F. Taback, Mathematics Education

For advisement about teacher certification in these and other areas, check with the Division Certification Officer (Carman Hall, Room B33).

The Department of Middle and High School Education offers the following programs described below:

- M.S.Ed. in Business and Technology Education (Students are not currently being accepted into this program.)
- M.S.Ed. in English Education
- Advanced Certificate: English Education (21-24 credits)
- M.S.Ed. in Teaching English to Speakers of Other Languages (T.E.S.O.L.)
- Advanced Certificate: T.E.S.O.L.
- M.S.Ed. in Mathematics Education (5-9 or 7-12)
- Advanced Certificate: Mathematics Education (21-24 credits)
- M.S.Ed. in Science Education
- Advanced Certificate: Science Teacher (21-24 credits)
- M.A. for Secondary School Teachers of Social Studies
- Advanced Certificate: Social Studies Education (21-24 credits)
- Advanced Certificate: Bilingual Extension (Birth-Grade 12)
- Advanced Certificate: Languages Other than English Education (15-18 credits)

Students interested in obtaining a master's degree in other secondary-school certification areas should also consult information contained within this Bulletin under the relevant department(s) and meet with an adviser in the Department of Middle and High School Education.

In addition, individual programs may require the fulfillment of undergraduate-level prerequisites. These prerequisites cannot be used to fulfill degree requirements in graduate programs and must be taken in addition to degree requirements. See individual program advisors for information and guidance.

Middle and High School Education programs engage students in work that relates to their experiences as classroom teachers and expands their horizons to new opportunities in their schools and districts. The programs provide both theory and hands-on techniques for instruction and classroom management. An experiential, problem-solving approach to instruction combines time-honored methods with the latest technologies for building broad, transferable personal and occupational skills. Programs provide a background in theories of learning, the social and philosophical foundations of education, curriculum design, methods of teaching, and research techniques critical for all teachers.

M.S.ED. PROGRAM IN BUSINESS AND TECHNOLOGY EDUCATION*

**Students are not currently being accepted into this program.*

This program leads to a master's degree in Business and Technology Education. It can also provide initial certification in teaching

business and marketing subjects. Upon completion of additional requirements, candidates will be eligible to receive New York State professional certification to teach business and marketing subjects. The M.S.Ed. program in Business and Technology Education is designed for two groups of students:

Sequence 1 (33-36 credits). Holders of bachelor's degrees who majored in an area of business and are seeking initial certification as teachers of business and marketing.

Sequence 2 (30 credits). Holders of bachelor's degrees who majored in an area of business and are seeking a master's degree but not certification. Students in this sequence may wish to teach in adult learning settings, such as private business schools, community colleges, and training institutes.

Admission Requirements

1. A bachelor's degree or equivalent from an accredited college or university with a major in business and marketing or its equivalent and an overall index of 2.7 or better.
2. Business and technology coursework to include at least one course from 6 of the following areas: Accounting, Business Law, Career Development, Communications, Computation, Economics and Personal Finance, Entrepreneurship, Information Systems, International Business, Interrelationships of Business Functions, Marketing, and Management; with an overall index of 3.0 or better in business and technology courses.
3. Submit scores on the New York State Liberal Arts and Sciences Test (L.A.S.T.).
4. Two letters of recommendation, at least one from a college or university instructor of business, technology, and marketing.
5. Personal interview.

Degree Requirements

All courses must be selected in consultation with, and with the approval of, an adviser in business and technology education. All students will complete the 30-credit program listed below. Sequence 1 students will complete the basic program plus student teaching or its equivalent: ESC 595 (3) or ESC 596 (6).

Overview of the Program

The basic, 30-credit curriculum, in three instructional modules, is as follows:

- (I) Core Education Sequence (15 credits): ESC 501 (3), ESC 502 (3), ESC 520 (3), ESC 529 (3), ESC 536 (3)
- (II) Research or Curriculum Development (15 credits):
Students follow either the research sequence (A) or the curriculum sequence (B).
 - Research Sequence A (15 credits): Advanced Pedagogical Sequence (choose 9 from the following): ESC 722 (3), ESC 782 (3), ESC 788 (3), ESC 790 (3). Plus each of the following (6 credits): ESC 705 (1), ESC 706 (2), ESC 707 (3).
 - Curriculum Sequence B (total 15 credits): Advanced Pedagogical Content (12 credits): ESC 772 (3), ESC 782 (3), ESC 788 (3), ESC 790 (3). Plus the following (3 credits): ESC 789 (3).
- (III) Internship or Student Teaching (*for students in Sequence 1 and working toward teacher certification*) (3-6 credits): ESC 595 (3) or ESC 596 (6).

M.S.ED. PROGRAM IN ENGLISH EDUCATION

This program is designed for students seeking a master's degree in English Education, grades 7-12. Upon successful completion of additional certification requirements, including specified teacher examinations, candidates will also be eligible to receive both Initial and Professional Certification to teach English in New York State in grades 7-12.

Admission Requirements

1. Possess a bachelor's degree in English or its equivalent from an accredited college or university.
2. Have earned a minimum cumulative index of 3.0 in the undergraduate record.
3. Submit scores on the New York State Liberal Arts and Sciences Test (L.A.S.T.)
4. If conditionally admitted, make up undergraduate coursework starting in the first semester and finishing in no more than three consecutive semesters.
5. Submit a 500-word essay outlining career goals.
6. Submit two to three letters of recommendation.
7. Participate in an individual interview.
8. For Sequence 2 only, possess Transitional B certificate in Teaching English grades 7-12.

Degree Requirements

All students will complete one of the following sequences: 36-45 credits (Sequence 1) or 33 credits (Sequence 2). All courses must be selected in consultation with, and with the approval of, an adviser in English Education. Applicants for this degree include:

Sequence 1 (36-45 credits): Candidates with an undergraduate degree in English or the equivalent who lack education courses and who seek initial certification in English Education grades 7-12.

1. Core Education (15-18 credits): ESC 501 (3), 502 (3), 529 (3), 522 (3), 595 (3) OR 596 (6).
2. Teaching of English (6-9 credits): Selected from: ESC 720 (3), 721 (3), 722 (3), 723 (3), 724 (3), 730 (3), or 772 (3).
3. English Electives (9-12 credits): Consult with an adviser in the English Education program for the appropriate course(s) to satisfy this requirement.
4. Research (6 credits): ESC 705 (3), 706 (1), and 707 (2). Sequence culminates in an approved master's project.

Sequence 2 (33 credits): Teachers who hold a valid Transitional B certificate in English Education grades 7-12 from New York State.

1. Core Education (12 credits): ESC 501 (3), 529 (3), 522 (3), and 595 (3).
2. Teaching of English (9 credits): Selected from: ESC 720 (3), 721 (3), 722 (3), 723 (3), 724 (3), 730 (3), or 772 (3).
3. English Electives (9 credits): Consult with an adviser in the English Education program for the appropriate course(s) to satisfy this requirement.
4. Master's Project (3 credits): ESC 708 (3). Culminates in an approved curriculum project.

ADVANCED CERTIFICATE IN ENGLISH EDUCATION (21-24 CREDITS)

This program is designed for candidates who already have a master's degree in English or a related field and who seek New York State Certification.

Program Requirements

Students must consult with an adviser in the English Education program before starting their certificate program. During their first semester, matriculated students are required to plan their program with an English Education adviser. All students must complete the 21-24 credit curriculum below. In order to be recommended for N.Y.S. certification at the completion of the Certificate Program, candidates must pass the L.A.S.T., the C.S.T. in English, and the Written Assessment of Teaching Skills (A.T.S.-W), and meet all additional New York State foreign language, arts, and science requirements.

Admission Requirements

1. Possess an approved bachelor's degree (or its equivalent) from an accredited college or university, which meets the State requirements for a general education core in liberal arts and sciences.
2. Demonstrate the ability to successfully pursue graduate study by having a master's Grade Point Average of 3.0 or better.
3. Present Content Specialty Test (C.S.T.) and L.A.S.T. scores.
4. Submit two (2) letters of recommendation and a 500-word essay on career goals.
5. Participate in an interview.
6. Meet additional Departmental, divisional, and New York State requirements, if any.
7. If conditionally admitted, make up requirements starting in the first semester and finishing in no more than three consecutive semesters.

Curriculum

The 21-24 credit certificate curriculum consists of three instructional areas:

I. Foundations of Education (9 credits)

ESC 501: Psychological Foundations of Education (3 credits)

ESC 502: Social Foundations of Education: A Multicultural Perspective (3 credits)

ESC 529: Language, Literacy, and Technology in Education (3 credits)

II. Methods, Curriculum, and Instruction (9 credits)

ESC 522: Teaching English in Middle and High School (3 credits) and 6 additional credits to be selected in consultation with the program coordinator from the courses below:

ESC 720: Reading and Reading Materials in the Middle and High School

ESC 721: Literature for Middle and High School Students

ESC 724: Methods of Teaching Writing in the Middle and High School

III. Practicum (3-6 credits)

ESC 595: Internship in Classroom Teaching (3 credits) OR

ESC 596: Student Teaching in Middle and High School Grades (6 credits)

M.S.ED. PROGRAM IN TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES (T.E.S.O.L.)

This program is designed for students seeking a master's degree in Teaching English to Speakers of Other Languages (T.E.S.O.L.). It can also provide initial New York State certification in English to speakers of other languages (E.S.O.L.) for teachers (Birth-grade 12), or additional E.S.O.L. certification for those already certified. Holders of this master's degree can obtain professional certification in E.S.O.L. upon completion of additional requirements. Applicants for this degree include:

Sequence 1 (30 credits): Students who already possess New York State certification and who seek additional certification as teachers of E.S.O.L. Birth-grade 12.

Sequence 2 (36-39 credits): Liberal arts and sciences graduates who lack education courses and who seek initial certification in E.S.O.L. Birth-grade 12.

Sequence 3 (30-33 credits): Teachers and prospective teachers of adult education and others who desire advanced study in T.E.S.O.L. but are not seeking Birth-grade 12 certification.

Sequence 4 (33 credits): Teachers who hold a valid Transitional B certificate in T.E.S.O.L. from New York State.

Admission Requirements

1. Possess a bachelor's degree (or its equivalent) from an accredited college or university that meets New York State requirements for a general education core in the liberal arts and sciences. This degree shall include a minimum of 6 credits in English literature.
2. For Sequence 1, possess New York State teacher certification. For Sequence 4, hold a valid New York State Transitional B certificate in T.E.S.O.L.
3. For Sequence 2, submit scores on the New York State Liberal Arts and Sciences Test (L.A.S.T.).
4. Demonstrate the ability to pursue graduate study successfully by having an undergraduate index of B or a master's degree.
5. Demonstrate the study of a language and culture other than English (12 credits) or an equivalent experience.
6. Submit two (2) letters of recommendation and a 500-word essay on career goals.
7. Participate in an interview that requires producing a writing sample in English, or, if the applicant resides abroad and cannot participate in an interview, present a Test of Spoken English (T.S.E.) score of at least 55.
8. If the undergraduate degree was earned in a language other than English, present a paper-based T.O.E.F.L. score of at least 600 and a Test of Written English (T.W.E.) score of at least 6, or a computer-based T.O.E.F.L. score of at least 250, or evidence of a master's degree earned in English.
9. Satisfy appropriate voice, speech, and health standards.
10. Meet additional departmental, divisional, and New York State requirements, if any.
11. If conditionally admitted, make up requirements starting in the first semester and finishing in no more than three consecutive semesters.

Degree Requirements

Students must consult with an adviser in the T.E.S.O.L. program before starting their master's program. During their first semester, matriculated students are required to plan their graduate program with an adviser in the T.E.S.O.L. program. All students will complete the curriculum corresponding to one of

the sequences below: 30 credits (Sequence 1); 36-39 credits (Sequence 2); 30-33 credits (Sequence 3); or 30-33 credits (Sequence 4). All courses must be selected in consultation with, and with the approval of, an adviser in T.E.S.O.L.

Curriculum: Sequence 1 (30 credits)

The 30-credit curriculum for Sequence 1 consists of five instructional areas.

1. Language Education (12): SPE 703 (3), ESC 725 (3), 759 (3), and 760 (3).
2. Cultural Perspectives (3): ESC 769 (3) or another course in cultural perspectives selected in consultation with the adviser.
3. Methods, Materials, and Evaluation (9): EDC/EDE 727 (3), ESC 761 (3), and 766 (3).
4. Practicum (3): ESC 797 (3).
5. Master's Project (3): ESC 708 (3). Culminates in an approved curriculum project.

Curriculum: Sequence 2 (36-39 credits)

The 36-39 credit curriculum for Sequence 2 consists of six instructional areas.

1. General Education (6): ESC 501 (3) and 502 (3).
2. Language Education (12): SPE 703 (3), ESC 725 (3), 759 (3), and 760 (3).
3. Cultural Perspectives (3): ESC 769 (3) or another course in cultural perspectives selected in consultation with the adviser.
4. Methods, Materials, and Evaluation (9): EDC/EDE 727 (3), ESC 761 (3), and 766 (3).
5. Practicum (3-6): ESC 797 (3-6).
6. Master's Project (3): ESC 708 (3). Culminates in an approved curriculum project.

Curriculum: Sequence 3 (30-33 credits)

The 30-33 credit curriculum for Sequence 3 consists of six instructional areas.

1. General Education (6): ESC 501 (3) and 502 (3).
2. Language Education (9): SPE 703 (3), ESC 725 (3), and 760 (3).
3. Cultural Perspectives (3): ESC 769 (3) or another course in cultural perspectives selected in consultation with the adviser.
4. Methods, Materials, and Evaluation (6): ESC 761 (3) and 766 (3).
5. Practicum (3-6): ESC 797 (3-6).
6. Master's Project (3): ESC 708 (3). Culminates in an approved curriculum project.

Curriculum: Sequence 4 (30-33 credits)

The 30-33-credit curriculum for Sequence 4 consists of six instructional areas.

1. General Education (3): ESC 502 (3).
2. Language Education (12): SPE 703 (3), ESC 725 (3), 759 (3), and 760 (3).
3. Cultural Perspectives (3): ESC 769 (3) or another course in cultural perspectives selected in consultation with the adviser.
4. Methods, Materials, and Evaluation (9): EDC/EDE 727 (3), ESC 761 (3), and 766 (3).
5. Practicum (3-6, depending on the candidate's prior documentable teaching experience): ESC 611 (0), 612 (0), 797 (3).
6. Master's Project (3): ESC 708 (3). Culminates in an approved curriculum project.

Additional Requirements for Initial and Professional Certification in T.E.S.O.L.

In order to be recommended for initial certification in T.E.S.O.L. Birth-grade 12, students must: (a) complete the master's degree (Sequences 2 or 4) with a cumulative index of 3.0 or better; and (b) present passing scores on the following New York State examinations: L.A.S.T., A.T.S.-W., and E.S.O.L.

In order to qualify for professional certification in E.S.O.L., in addition to the master's degree (Sequences 1, 2, or 4), teachers must complete one year of mentored, full-time teaching and two years of full-time teaching in a public or private school, which serves Birth-grade 12, and must meet any additional New York State requirements.

ADVANCED CERTIFICATE: TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES (T.E.S.O.L.)

This program is designed for students who already have a master's degree, who possess New York State teacher certification, and who seek additional New York State certification in teaching English to speakers of other languages (T.E.S.O.L.) Birth-grade 12.

Admission Requirements

1. A bachelor's degree (or its equivalent) from an accredited college or university that meets the State requirements for a general education core in the liberal arts and sciences. This degree shall include a minimum of 6 credits in English literature.
2. New York State teacher certification.
3. A master's degree appropriate for New York State professional certification.
4. Demonstrate the study of a language other than English (12 credits) or an equivalent experience.
5. The study of cultural perspectives of one or more E.S.L. populations (at least 3 credits).
6. Two (2) letters of recommendation and a 500-word essay on career goals.
7. Participate in an interview, which requires producing a writing sample in English.
8. Satisfy appropriate voice, speech, and health standards.
9. Meet additional Departmental, divisional, and New York State requirements, if any.
10. If conditionally admitted, make up requirements starting in the first semester and finishing in no more than three consecutive semesters.

Certificate Requirements

Students must consult with an adviser in the T.E.S.O.L. program before starting their certificate program. During their first semester, matriculated students are required to plan their program with a T.E.S.O.L. adviser. All students must complete the 24-credit curriculum below.

In order to be recommended for certification, candidates must complete the Advanced Certificate: T.E.S.O.L. program with a cumulative index of 3.0 or better, present passing scores on the E.S.O.L. content area examination, and meet any additional New York State requirements.

Curriculum

The 24-credit certificate curriculum consists of three instructional areas:

Language Education (12): SPE 703 (3), ESC 759 (3), ESC 760 (3), ESC 725 (3).

Methods, Materials, and Evaluation (9): EDC/ EDE 727 (3), ESC 761 (3), and ESC 766 (3).

Practicum (3): ESC 797 (3-6).

M.S.ED. PROGRAM IN MATHEMATICS EDUCATION, MIDDLE CHILDHOOD EDUCATION (GRADES 5-9), OR ADOLESCENT EDUCATION (GRADES 7-12)

The graduate program for middle and high school mathematics teachers leads to a Master of Science in Education degree. Registered with the State Education Department, this program leads to both Initial and Professional Certification to teach mathematics in grades 5-9 or 7-12, provided all other requirements have been satisfied.

To be eligible for the master's in Mathematics Education for Grades 5-9, candidates must fall into one of the following categories:

Sequence 1 (33-39 credits). For liberal arts and sciences graduates who have completed 18 credits in mathematics, including Calculus I and Calculus II, but who lack professional education coursework.

Sequence 2 (32-35 credits). For teachers who hold a Transitional B certificate in Mathematics from New York State through special CUNY and N.Y.C.D.O.E. programs.

Admission Requirements

1. A bachelor's degree (or its equivalent) from an accredited college or university with an overall index of 2.7 or better.
2. Mathematics coursework of at least 18 credits that include Calculus I and II, with an overall index of 2.7 or better in all mathematics courses taken.
3. For Sequence 2, must hold a valid Transitional B Certificate from N.Y.S.E.D.
4. Submission of scores on the New York State Liberal Arts and Sciences Test (L.A.S.T.) and the New York State Content Specialty Test (C.S.T.) in Mathematics.
5. If conditionally admitted, make up requirements starting in the first semester and finishing in no more than three consecutive semesters.
6. Two letters of recommendation, at least one of which is from a college or university instructor of mathematics.
7. A 500-word essay on career goals.
8. A personal interview.

Degree Requirements (Grades 5-9)

Students must consult with a Mathematics Education advisor before starting their master's program and must plan their overall program with the advisor during their semesters of attendance. Students must complete one of the two sequences outlined below

Sequence 1: (1) 30 credits of prescribed coursework; (2) 3-6 credits of supervised fieldwork; (3) a comprehensive examination OR research project (3); and (4) maintain a B average.

Sequence 2: (1) 30 credits of prescribed coursework; (2) 2 credits of supervised fieldwork; (3) a comprehensive examination OR research project (3); and (4) maintain a B average.

Overview of the Program

Sequence 1 (Grades 5-9). Students must successfully complete:

- 12-15 credits of Core Education Courses, including 3-6 credits of supervised fieldwork.
- 9 credits in pedagogical content in Mathematics Education.
- 12 credits in Mathematics.
- A comprehensive written examination or research project after all coursework has been completed. Students who elect to conduct a research project must enroll in 3 additional credits of research-related coursework.

Sequence 2 (Transitional B-Grades 5-9). Students must successfully complete:

- 11 credits of Core Education Courses, including 2 credits of supervised fieldwork.
- 9 credits in pedagogical content in Mathematics Education.
- 12 credits in Mathematics.
- A comprehensive written examination or research project after all coursework has been completed. Students who elect to conduct a research project must enroll in 3 additional credits of research-related course work.

Curriculum Sequence 1 (Grades 5-9) 33-39 credits

Core Education Courses (12-15 credits)

- ESC 501: Educational Psychology (3)
ESC 502: Historical and Social Foundations of Education (3)
ESC 532: Teaching Mathematics in Middle and High School (3) AND ESC 595: Internship in Mathematics (3) OR ESC 596: Student Teaching in Mathematics (6)

Pedagogical Content in Mathematics Education (9 credits)

- ESC 740: Teaching Mathematics in Grades 7-10 (3)
ESC 742: Research in Mathematics Education (3)
ESC 748: Teaching Problem Solving in Mathematics in Middle and High School (3)

Mathematics (12 credits)

- MAT 601: Secondary Mathematics from an Advanced Standpoint (3)
MAT 602: Introduction to Number Theory & Modern Algebra (3)
MAT 655: Exploring Mathematics Using Technology (2)
MAT 661: History of Mathematics (4)

Culminating Experience (0-3 credits)

- ESC 706: Research in Problems of Teaching a Specialized Subject (1)
ESC 707: Project Seminar (2) OR Comprehensive Examination (0 credit)

Curriculum Sequence 2 (Transitional B Sequence for Grades 5-9) 32-35 credits

Core Education Courses: (11 credits)

- ESC 501: Educational Psychology (3)
ESC 502: Historical and Social Foundations of Education (3)
ESC 532: Teaching Mathematics in Middle and High School (3) and
ESC 595: Internship in Classroom Teaching (2)

Pedagogical Content in Mathematics Education (9 credits)

- ESC 740: Teaching Mathematics in Grades 7-10 (3)
ESC 742: Research in Mathematics Education (3)
ESC 748: Teaching Problem Solving in Mathematics in Middle and High School (3)

Mathematics (12 credits)

- MAT 601: Secondary Mathematics from an Advanced Standpoint (3)
MAT 602: Introduction to Number Theory & Modern Algebra (3)
MAT 655: Exploring Mathematics Using Technology (2)
MAT 661: History of Mathematics (4)

Culminating Experience (0-3 credits)

- ESC 706: Research in Problems of Teaching a Specialized Subject (1)
ESC 707: Project Seminar (2) OR Comprehensive Examination (0 credit)

Continuation Requirements

Students must maintain a 3.0 Grade Point Average throughout the course of study.

To be eligible for the Master's in Mathematics Education for Grades 7-12, candidates must fall into one of the following categories:

Sequence 3 (39- 45 credits). For liberal arts and sciences graduates who do not hold a bachelor's degree in Mathematics but have completed 15 credits in mathematics, including Statistics, Calculus I, Calculus II, Linear Algebra, and History of Mathematics, and lack professional education coursework.

Sequence 4 (33-39 credits). For candidates who hold a bachelor's degree in Mathematics only, but who lack professional education coursework.

Sequence 5 (32-35 credits). For teachers who hold a bachelor's degree in Mathematics and a Transitional B Certificate in Mathematics from New York State through special CUNY and N.Y.C.D.O.E. programs.

Admission Requirements

1. A bachelor's degree (or its equivalent) from an accredited college or university with an overall index of 2.7 or better.
2. For *Sequence 3*: Mathematics coursework to include Statistics; Calculus I; Calculus II; Linear Algebra; and History of Mathematics; with an overall index of 2.7 or better in all Mathematics courses taken.
3. For *Sequence 4*: Mathematics major.
4. For *Sequence 5*: Mathematics major AND N.Y.S. Transitional B Certificate.
5. Submit scores on the New York State Liberal Arts and Sciences Test (L.A.S.T.) and the New York State Content Specialty Test (C.S.T.) in Mathematics.
6. If conditionally admitted, make up requirements starting in the first semester and finishing in no more than three consecutive semesters.
7. Two letters of recommendation, at least one of which is from a college or university instructor of Mathematics.
8. A 500-word essay on career goals.
9. A personal interview.

Degree Requirements (Grades 7-12)

Students must consult with a Mathematics Education advisor before starting their master's program and must plan their overall program with the advisor during their first semester of attendance. Students must complete one of the three sequences outlined below:

Sequence 3. (1) 36 credits of prescribed coursework; (2) 3-6 credits of supervised fieldwork; (3) a comprehensive examination OR research project (3); and (4) maintain a B average.

Sequence 4. (1) 30 credits of prescribed coursework; (2) 3-6 credits of supervised fieldwork; (3) a comprehensive examination OR research project (3); and (4) maintain a B average.

Sequence 5. (1) 30 credits of prescribed coursework; (2) 2 credits of supervised fieldwork; (3) a comprehensive examination OR research project (3); and (4) maintain a B average.

Overview of the Program

Sequence 3 (Grades 7-12)

Students must successfully complete:

- 12-15 credits of Core Education Courses, including 3-6 credits of supervised fieldwork.
- 12 credits in pedagogical content in Mathematics Education.
- 15 credits in Mathematics.
- A comprehensive written examination or research project after all coursework has been completed. Students who elect to conduct a research project must enroll in 3 additional credits of research-related coursework.

Note: Students who lack college supervised full-time experience as a Mathematics teacher in grades 7-12 prior to completion of the program must register for 6 credits of supervised student teaching in lieu of the 3 credits of supervised fieldwork.

Sequence 4

Math majors who do NOT hold a N.Y.S. Transitional B Certificate, 7-12 must successfully complete:

- 12-15 credits of Core Education Courses, including 3-6 credits of supervised fieldwork.
- 12 credits in pedagogical content in Mathematics Education.
- 9 credits in Mathematics electives to be chosen in consultation with a program advisor.
- A comprehensive written examination or research project is required after all coursework has been completed. Students who elect to conduct a research project must enroll in 3 additional credits of research-related coursework.

Note: Students who lack college supervised full-time experience as a Mathematics teacher in grades 7-12 prior to completion of the program must register for 6 credits of supervised student teaching in lieu of the 3 credits of supervised fieldwork.

Sequence 5

Math Majors who hold a N.Y.S. Transitional B Certificate, 7-12 must successfully complete:

- 11 credits of Core Education Courses, including 2 credits of supervised fieldwork.
- 12 credits in pedagogical content in Mathematics Education.
- 9 credits in Mathematics electives to be chosen in consultation with a Program Advisor.
- A comprehensive written examination or research project after all coursework has been completed. Students who elect to conduct a research project must enroll in 3 additional credits of research-related coursework.

Curriculum

Sequence 3 (Grades 7-12) 39-45 credits

1. *Core Education Courses: (12-15 credits):* ESC 501 (3); 502 (3); 532 (3); and 595 (3) OR 596 (6).
2. *Pedagogical Content in Mathematics Education (12 credits):* ESC 740 (3); 742 (3); 748 (3); 749 (3).
3. *Mathematics (15 credits):* MAT 601 (3); 604 (3); 637 (4); 655 (2); 615 (3).
4. *Culminating Experience (0-3 credits):* Research project or comprehensive examination. Students who elect to write a master's thesis must concurrently enroll in ESC 706 (1) and 707 (2).

Sequence 4 (Grades 7-12) 33-39 credits

1. *Core Education Courses: (12-15 credits):* ESC 501 (3); 502 (3); 532 (3); and 595 (3) or 596 (6).

2. *Pedagogical Content in Mathematics Education (12 credits):* ESC 740 (3); 742 (3); 748 (3); 749 (3).

3. *Mathematics (9 credits):* Three graduate electives in Mathematics chosen in consultation with a Program Advisor.

4. *Culminating Experience (0-3 credits):* Research project or comprehensive examination. Students who elect to write a master's thesis must concurrently enroll in ESC 706 (1) and 707 (2).

Sequence 5 (Transitional B Sequence for Grades 7-12) 32-35 credits

1. *Core Education Courses: (11 credits):* ESC 501 (3); 502 (3); 532 (3); 595 (2);

2. *Pedagogical Content in Mathematics Education (12 credits):* ESC 740 (3); 742 (3); 748 (3); 749 (3);

3. *Mathematics (9 credits):* Three graduate electives in mathematics chosen in consultation with a program advisor;

4. *Culminating Experience (0-3 credits):* Research project or comprehensive examination. Students who elect to write a Master's thesis must concurrently enroll in ESC 706 (1) and 707 (2).

ADVANCED CERTIFICATE IN MATHEMATICS EDUCATION (21-24 CREDITS)

This program is designed for candidates who hold a bachelor's degree in Mathematics and a master's degree in Mathematics or in an approved Mathematics-related field, and who seek New York State certification in Mathematics, grades 7-12.

Admission Requirements

1. Possess a bachelor's degree (or its equivalent) from an accredited college or university that meets New York State's requirements for a general education core in liberal arts and sciences. This degree shall include a Mathematics major with a minimum of 36 credits in Mathematics.
2. Possess a master's degree in Mathematics or an approved Mathematics-related field.
3. Demonstrate the ability to pursue graduate study successfully by having a master's Grade Point Average of 3.0 or better.
4. Satisfy the content requirements for New York State Initial Certification in Mathematics, grades 7-12.
5. Submit scores on the N.Y.S. L.A.S.T. Teacher Examination and the N.Y.S. Content Specialty Test (C.S.T.) in Mathematics.
6. Submit two (2) letters of recommendations, at least one of which is from a college or university instructor in mathematics.
7. Submit a 500-word essay on career goals.
8. Participate in an interview.
9. Meet additional Departmental, divisional, and New York State requirements, if any.
10. If conditionally admitted, make up requirements starting in the first semester and finishing in no more than three consecutive semesters.

Certificate Requirements

The Certificate Program in Mathematics Education consists of 21-24 credits, as outlined below. A minimum of a B average must be maintained throughout the course of the Program. All students are to consult with an adviser in Mathematics Education before starting the program. In order to be recommended for N.Y.S. certification at the completion of the program, candidates must have passed the L.A.S.T., the C.S.T. in Mathematics, and the N.Y.S. Written Assessment of Teaching Skills (A.T.S.-W.); they must also meet any additional requirements set by New York State.

Curriculum

- Foundations of Education (9 credits): ESC 501 (3), 502 (3), 529 (3).
- Curriculum and Instruction (9 credits): ESC 532 (3); plus 6 additional credits in Mathematics Education to be selected in consultation with the Program Coordinator.
- Practicum (3-6 credits): ESC 595 (3) OR 596 (6).

M.S.ED. PROGRAM IN SCIENCE EDUCATION

This program leads to a master's degree in Science Education. Upon completion of additional requirements, candidates will be eligible to receive New York State Initial Certification to teach one or more of the following sciences at the level of adolescent education (Grades 7-12): biology, chemistry, earth science, general science, and physics.

To be eligible for the Science Education Master's Program, potential students must fall into one of the following categories:

Sequence 1: For candidates who have, or are eligible for, Initial Certification in subjects other than science and who seek certification as science teachers.

Sequence 2: For candidates who have completed at least 36 credits in biology, chemistry, geology, or physics, but who lack professional education coursework and who seek Initial Certification.

Sequence 3: For candidates who hold a valid Transitional B certificate in biology, chemistry, earth science, general science, or physics, grades 7-12, from New York State.

Admission Requirements

1. Possess a bachelor's degree (or its equivalent) from an accredited college or university with an overall index of 3.0 or better.
2. Demonstrate the ability to successfully pursue graduate study. (Above-average achievement in academic work and in the teaching specialization is required).
3. Submission of scores on the New York State Liberal Arts and Sciences Test (L.A.S.T.) and Content Specialty Test (C.S.T).
4. For Sequence 1 Admission: An undergraduate science major or the equivalent and a minor in middle and high school education or the equivalent.
5. For Sequence 2 and 3 Admission: At least 36 credits in biology, chemistry, geology, or physics. Matriculants may be asked to complete undergraduate and/or graduate prerequisite coursework in addition to degree requirements, based on the evaluation of their credentials by an adviser in the Science Education Program.
6. Satisfy appropriate voice, speech, and health standards. Submit two letters of recommendation, at least one of which is from a college or university science instructor.
7. Personal interview.

Degree Requirements

Students must consult with an adviser in the Science Education Program before starting their master's program. During their first semester, matriculated students are required to plan their graduate program with an adviser in the Science Education Program. Students must complete one of the two sequences outlined below.

Curriculum

The curriculum for each sequence is distributed in four instructional modules as follows:

Sequence 1 (33-36 credits)

1. Core Education Sequence (3-6 credits): ESC 529 (3). Based on Program Coordinator's assessment of prior experience and qualification, candidates may also be required to take ESC 519 (3).

2. Curriculum and Instruction (12 credits): ESC 722 (3), ESC 755 (3), ESC 767 (3), ESC 770 (3).

3. Research and Culmination Projects (6 credits): ESC 705 (3), ESC 706 (1), ESC 707 (2).

4. Science Content (12 credits): Science content course requirements must align with undergraduate science preparation and with intended certification subject area. Consult with an adviser in the Science Education Program for the appropriate course(s) to satisfy this requirement. Such courses may include but are not limited to:

- Biology: BIO 611, BIO 612, BIO 618.
- Chemistry: CHE 542, CHE 544, CHE 548.
- Geology: GEO 501, GEO 502, GEO 503.
- Physics: PHY 601, AST 601, AST 602.
- General Science: BIO 612, CHE 542, GEO 501, and PHY 601.

Sequence 2 (39-48 credits)

1. Core Education Sequence (15-18 credits): ESC 501 (3), ESC 502 (3), ESC 519 (3), ESC 529 (3), AND ESC 595 (3) or ESC 596 (6).

2. Curriculum and Instruction (12 credits): ESC 722 (3), ESC 755 (3), ESC 767 (3), ESC 770 (3).

3. Research and Culmination Projects (6 credits): ESC 705 (3), ESC 706, 2 (1), ESC 707 (2).

Science Content (6-12 credits): Science content course requirements must align with undergraduate science preparation and with intended certification subject area. Consult with an adviser in the Science Education Program for the appropriate course(s) to satisfy this requirement. Such courses may include but are not limited to:

- Biology: BIO 618 and BIO 611 or BIO 612.
- Chemistry: CHE 542 and CHE 544 or CHE 548.
- Geology: GEO 501 and GEO 502 or GEO 503.
- Physics: PHY 601 and AST 601 or AST 602.
- General Science: BIO 618, CHE 542, GEO 501, PHY 601.

Sequence 3 (31-33 credits)

1. Core Education Sequence (10 credits): ESC 501 (3), 502 (3), 519 (3), 611 (0.5), and 612 (0.5).

2. Curriculum and Instruction (9 credits): ESC 722 (3), 755 (3), 767 (3).

3. Research and Culmination Projects (6 credits): ESC 705 (3), 706^{1, 2} (1), 707² (2).

1. Must be taken concurrently with ESC 707.

2. Students who already hold a master's degree and have completed a research project as a requirement for that degree may elect to take a comprehensive examination and substitute 3 credits of electives for ESC 706 and ESC 707 with the approval of the Graduate Adviser.

Science Content (6-8 credits): Science content course requirements must align with undergraduate science preparation and with intended certification subject area. One of the courses must be identified as for candidates who are teaching or plan to teach

science in secondary schools. Consult with an adviser in the Science Education Program for the appropriate course(s) to satisfy this requirement. Such courses may include but are not limited to:

- Biology: BIO 618 and 611 or 612.
- Chemistry: CHE 542 and 544 or 548.
- Geology: GEO 501 and 502 or 503.
- Physics: PHY 601 and AST 601 or AST 602.
- General Science: BIO 618, CHE 542, GEO 501, PHY 601.

ADVANCED CERTIFICATE: SCIENCE EDUCATION (21-24 CREDITS)

This program is designed for candidates who already have a bachelor's and a master's degree in Biology, Chemistry, Geology, or Physics and who seek New York State Certification in one of the following content areas: biology, chemistry, earth Science, and physics, grades 7-12.

Program Requirements

Students must consult with an adviser in the Science Education program before starting their certificate program. During their first semester, matriculated students are required to plan their program with a Science Education adviser. All students must complete the 21-24 credit curriculum below. In order to be recommended for N.Y.S. certification at the completion of the Certificate Program, candidates must pass the L.A.S.T., the C.S.T. in one of the sciences, the Written Assessment of Teaching Skills (A.T.S.-W), and meet any additional New York State requirements.

Admission Requirements

1. Possess a bachelor's degree (or its equivalent) from an accredited college or university that meets New York State's requirements for a general education core in liberal arts and sciences.
2. Possess an approved master's degree in an appropriate content area.
3. Have completed a minimum of 36 credits in biology, chemistry, geology, or physics.
4. Demonstrate the ability to pursue graduate study successfully by having a master's Grade Point Average of 3.0 or better.
5. Satisfy the content requirements for New York State initial certification.
6. Submit scores on the N.Y.S. L.A.S.T. Teacher Examination and the N.Y.S. Content Specialty Test (C.S.T.)
7. Submit two (2) letters of recommendation and a 500-word essay on career goals.
8. Participate in an interview.
9. Meet additional Departmental, divisional, and New York State requirements, if any.
10. If conditionally admitted, make up requirements starting in the first semester and finishing in no more than three consecutive semesters.

Curriculum

The 21-24-credit certificate curriculum consists of three instructional areas:

I. Foundations of Education (9 credits)

ESC 501: Psychological Foundations of Education (3 credits)
AND

ESC 502: Social Foundations of Education: A Multicultural Perspective (3 credits) AND

ESC 529: Language, Literacy, and Technology in Education (3 credits)

II. Methods, Curriculum, and Instruction (9 credits)

ESC 519: Teaching Science in Middle and High School (3 credits)
AND 6 additional credits to be selected in consultation with the Program Coordinator from the courses below:

ESC 722: Teaching Communication Skills in Content Areas (3 credits)

ESC 755: Teaching the Historical Foundations of Science (3 credits)

ESC 767: The Museum as a Resource for Teaching Science (3 credits)

ESC 770: Methods of Teaching Science in Secondary School: Special Topics (3 credits)

III. Practicum (3-6 credits)

ESC 595: Internship in Classroom Teaching (3 credits) OR

ESC 596: Student Teaching in Middle and High School Grades (6 credits)

M.A. PROGRAM IN SOCIAL STUDIES EDUCATION

The Master of Arts degree program in Social Studies is registered with New York State and leads to Initial and Professional Certification as a Teacher of Social Studies: Grades 7-12, provided all other requirements have been met.

In our rapidly globalizing society and in large urban school systems with diverse multicultural student populations, the teaching of Social Studies is more important than ever before. The goal of Lehman's social studies program is to produce reflective, competent, and concerned citizens. This program emphasizes the interrelationship between thinking, skillful action, and feeling—since all are vital for the development of active citizens.

Admission Requirements

1. A bachelor's degree or equivalent from an accredited college or university with a Grade Point Average of 3.0 in the undergraduate major and a cumulative Grade Point Average of 2.7 in undergraduate work. If conditionally accepted, must earn 3.0 in courses designated by the Program Coordinator.
2. Bachelor's degree must be in History or any of the social sciences.
3. Students must have at least one undergraduate course in the following areas: Lehman undergraduates can satisfy these requirements prior to admission in the master's program by choosing courses for their distribution requirements in the areas listed.
 - Anthropology
 - Sociology
 - Geography
 - Political science
 - Economics
 - Psychology
 - Two history survey courses, one in U.S. history and one in European or world history.
4. The New York State L.A.S.T. (Liberal Arts & Sciences Test) must have been taken and scores submitted to the Program Coordinator. If conditionally accepted, scores must be presented by the end of the first semester student is matriculated.
5. Candidates must schedule an interview with the Social Studies Program Coordinator that includes a transcript review.
6. If conditionally accepted, make up deficiencies by the end of the third consecutive semester of matriculation.
7. Two letters of recommendation.
8. 500-word application essay on interest in the program as it relates to long-term career interests.

Degree Requirements

To be eligible for the Master of Arts degree in Social Studies, students must successively complete the following 36-39 credit sequence:

I. Content Core

Students must satisfy the following required areas of study. These requirements may be met by either graduate courses or by undergraduate coursework taken prior to or after commencement of graduate study. Undergraduate transcripts will be evaluated on an individual basis as part of the admissions process. Lehman undergraduates can satisfy these requirements prior to admission in the master's program by choosing courses for their distribution requirements in the areas listed.

- Anthropology
- Sociology
- Geography
- Political science
- Economics
- Psychology
- Two history survey courses, one in U.S. history and one in European or world history.

History courses (15 credits)

All students must take: HIU 534 and HIW 533. The remaining 9 credits to be chosen in consultation with the Program Advisor.

II. Pedagogical Core

A total of 18 graduate credits (or equivalent) in sequence:

9 credits in general education sequence:

ESC 501 (3): Psychological Foundations of Education.

ESC 502 (3): Historical Foundations of Education: A Multicultural Perspective.

ESC 529 (3): Language, Literacy and Educational Technology.

9 credits in the Social Studies Education sequence:

(Candidates must have submitted passing scores to the Program Coordinator from the L.A.S.T. (Liberal Arts and Science Test) prior to enrolling in ESC 533: Teaching World History in Middle and High School and/or ESC 534: Teaching U.S. History and Government.)

ESC 533 (3): Teaching World History in Middle and High School.

ESC 534 (3): Teaching U.S. History and Government.

ESC 708 (3): Project Seminar in Curriculum, Materials, and Assessment in Specialized Areas.

Successfully complete a culminating project in ESC 708. See Program Coordinator for culminating project requirements.

III. Practicum

Candidates must obtain a B or better in each methods course AS WELL AS HAVE PASSED THE A.T.S.-W to be eligible for Student Teaching (ESC 596) or Student Internship (ESC 595).

ESC 595 (3) Internship in Classroom Teaching OR ESC 596 (6) Student Teaching in Middle and High School (1 full-time semester supervised student teaching).

To graduate, students must complete all degree requirements, including educational core courses and any additional requirements including pedagogical, content area and/or distribution courses with an overall GPA of 3.0 or better

Certificate Requirements

1. If other courses are taken, or equivalency requested, additional hours of classroom observations may be required in order to meet N.Y.S.E.D. certification requirements of 100 hours of field observations prior to student teaching.

2. Satisfy appropriate voice, speech and health standards.
3. In order to be recommended for N.Y.S. certification, candidates must submit passing scores on the L.A.S.T. (Liberal Arts & Sciences Test), A.T.S.-W. (Assessment of Teaching Skills-Performance), C.S.T.(Content Specialty Test), and any additional New York State requirements and consult with the Certification Officer, Dean of Education Office, for other requirements, e.g., core liberal arts requirements, fingerprinting.

ADVANCED CERTIFICATE IN SOCIAL STUDIES EDUCATION (21-24 CREDITS)

This program is designed for students who already have a bachelor's and master's degree in History, or an approved social science content area (but lack required Education courses), and who seek New York State Certification in Social Studies: Grade 7-12.

Certificate Requirements

Students must consult with an adviser in the Social Studies Education program before starting their certificate program. During their first semester, matriculated students are required to plan their program with a Social Studies Education adviser. All students must complete the 21-24-credit curriculum below. The L.A.S.T. and C.S.T. examinations must be passed in order to take the Social Studies teaching methods courses. In order to be recommended for certification, candidates must pass the L.A.S.T., A.T.S.-W, and C.S.T. examinations and complete the Social Studies Education Certificate with a 3.0 or better G.P.A., and meet any additional New York State requirements.

Admission Requirements

1. Possess a bachelor's degree (or its equivalent) from an accredited college or university that meets New York State's requirements for a general education core in liberal arts and sciences.
2. Possess a master's degree in an approved social studies content area.
3. Have completed a minimum of 36 credits in history or in an approved social studies content area.
4. Submit scores on the N.Y.S. L.A.S.T. Teacher Examination and the NYS Content Specialty Test (CST) in Social Studies.
5. Demonstrate the ability to pursue graduate study successfully by having a master's Grade Point Average of 3.0 or better.
6. Submit two (2) letters of recommendation and a 500-word essay on career goals.
7. Participate in an interview.
8. Satisfy appropriate voice, speech, and health standards.
9. Meet additional departmental, divisional, and New York State requirements, if any.
10. If conditionally admitted, make up requirements starting in the first semester and finishing in no more than three consecutive semesters.

Curriculum

The 21-24 credit certificate curriculum consists of three instructional areas.

I. Foundations of Education (9): ESC 501 (3), ESC 502 (3), ESC 529 (3).

II. Methods, Curriculum, and Instruction (9): ESC 534 (3) and 6 additional credits to be selected in consultation with the Program Coordinator.

III. Practicum (3-6): ESC 595 (3) or ESC 596 (6).

1. ESC 501, 502, 529, and 534 require 25 hours of fieldwork each.
2. ESC 534 and all other Social Studies teaching methods courses include a combined total of 25 hours of fieldwork.

3. ESC 595: *Teaching Internship will be taken by candidates already teaching in school settings for 3 credits and will include a weekly seminar.*

4. ESC 596: *Student Teaching will be taken by students who are not teaching for 6 credits and will include a weekly seminar.*

ADVANCED CERTIFICATE: BILINGUAL EXTENSION

This program is designed for Birth-grade 12 teachers who already possess New York State certification in one of the areas listed in Sequences 1 and 2 below, and who seek a bilingual extension to teach that subject in the native language as well as English. Applicants for the Advanced Certificate: Bilingual Extension include:

Sequence 1 (18 credits). Those seeking a bilingual extension to certification in Early Childhood Education, Childhood Education, literacy (B-6), or teaching children with disabilities at the early childhood or childhood levels.

Sequence 2 (15 credits). Those seeking a bilingual extension to certification in middle childhood education, adolescence education, literacy (Grades 5-12), or teaching children with disabilities at the middle childhood or adolescence education level.

Admission Requirements

1. A bachelor's degree or equivalent from an accredited college or university.
2. Sequence 1: N.Y.S. certification in early childhood education, childhood education, literacy (B-6), or teaching children with disabilities at the early childhood or childhood level.
3. Sequence 2: N.Y.S. certification in middle childhood education, adolescence education, literacy (Grades 5-12), or teaching children with disabilities at the middle childhood or adolescence education level.
4. Demonstrate an ability to pursue graduate study successfully by having an undergraduate index of B or a master's degree.
5. Demonstrate the study of a language and culture other than English (12 credits) or equivalent experience.
6. One letter of recommendation.
7. Participation in an interview that requires producing a writing sample in English and in the native language.
8. Satisfy appropriate voice, speech and hearing standards, and any additional Departmental requirements.
9. Meet requirements, if conditionally admitted, starting in the first semester and finishing in no more than three consecutive semesters.

Certificate Requirements

Students must consult with an adviser in the Advanced Certificate: Bilingual Extension program *before* beginning their studies. During their first semester, matriculated students are required to plan their graduate program with the adviser. To successfully complete the program, students must complete the curriculum as outlined below for Sequence 1 (18 credits) or Sequence 2 (15 credits).

New York State also requires candidates for the bilingual extension to pass the Bilingual Education Assessment (B.E.A.). Lehman expects students to pass this exam before completing nine (9) program credits or the first two semesters of matriculation.

Overview of the Program

Sequence 1 (18 credits)

1. *Core Bilingual Education Courses (9 credits):* SPE 703 (3), ESC 759 (3), ESC 769 (or another course in cultural perspectives selected in consultation with the adviser).
2. *Additional Requirements (9 credits):* EDE 751 (6), EDE 727 (3).

Sequence 2 (15 credits)

1. *Core Bilingual Education Courses (9 credits):* SPE 703 (3), ESC 759 (3), ESC 769 (or another course in cultural perspectives selected in consultation with the adviser).
2. *Additional Requirements (6 credits):* ESC 761 (3), ESC 763 (3).

ADVANCED CERTIFICATE FOR TEACHERS OF LANGUAGES OTHER THAN ENGLISH (15-18 CREDITS)

This program is designed for candidates who already have a master's degree in a language other than English and who seek New York State Certification in the area of Languages Other than English (L.O.T.E.), grades 7-12.

Admission Requirements

1. Bachelor's degree (or its equivalent) from an accredited college or university that meets the State's requirements for a general education core in the liberal arts and sciences.
2. Master's degree in a language other than English.
3. Demonstrate the ability to successfully pursue graduate study by having a master's Grade Point Average (G.P.A.) of 3.0 or better.
4. Satisfy the content requirements for New York State Initial Certification in education in a language other than English, grades 7-12.
5. Present scores for the Content Specialty Test (C.S.T.) and L.A.S.T.
6. Submit two (2) letters of recommendation and a 500-word essay on career goals.
7. Participate in an interview.
8. Satisfy appropriate voice, speech, and health standards.
9. Meet additional Departmental, divisional, and New York State requirements, if any.
10. If conditionally admitted, make up requirements starting in the first semester and finishing in no more than three consecutive semesters.
11. Submit scores for the A.C.T.E.L. O.P.I. (Oral Proficiency Interview) prior to matriculation.

Certificate Requirements

Students must consult with the adviser in the L.O.T.E. Education Program before starting their certificate program. During their first semester, matriculated students are required to plan their program with the L.O.T.E. Education Program Adviser. All students must complete the 15-18 credit curriculum below. In order to be recommended for certification, candidates must pass the C.S.T. (if applicable) and L.A.S.T. within the first semester following matriculation, complete the L.O.T.E. Education Certificate with a cumulative index of 3.0 or better, and meet any additional New York State requirements.

Curriculum

The 15-18-credit certificate curriculum consists of three instructional areas:

I. Foundations of Education (9 credits)

- ESC 501: Psychological Foundations of Education (3 credits) and
- ESC 502: Social Foundations of Education: A Multicultural Perspective (3 credits) and
- ESC 529: Language, Literacy, and Technology in Education (3 credits).

II. Methods, Curriculum, and Instruction (6 credits)

- ESC 524: Teaching Foreign Languages in Middle and High School (3 credits).
- ESC 562: Teaching Language Arts in Languages Other than English (3 credits).

III. Practicum (3-6 credits)

- ESC 595: Internship in Classroom Teaching (3 credits) or
- ESC 596: Student Teaching in Middle & High School Grades (6 credits).

COURSES IN MIDDLE AND HIGH SCHOOL EDUCATION

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

ESC 501: Psychological Foundations of Education. 3 hours, 3 credits. (Closed to students who have taken ESC 301 or equivalent.) Cognitive and emotional development from childhood through adolescence; learning theories; measurement and evaluation; inclusion of special student populations, and uses of relevant technology and software. Theories and research findings discussed in relation to classroom observations. Students will be responsible for assigned readings, lectures, class discussions, and field experiences.

ESC 502: Historical Foundations of Education: A Multicultural Perspective. 3 hours, 3 credits. Study of the historical development of education and schools within the context of various communities and families. Emphasis on the school as a sociocultural institution: issues of equity and bias, and the contributions of the major racial and ethnic groups, especially in New York City schools. Presentation of relevant technology and software.

ESC 509: Instructional Practices Across the Middle School Curriculum. 3 hours, 3 credits. Principles, approaches, and strategies across the curriculum for teaching middle childhood students, grades 5-6, in accordance with local, State, and national standards. *NOTE: May not be taken to fulfill the requirements of ESC 519-562.*

ESC 519: Teaching Science in Middle and High School. 3 hours, 3 credits. Research and practice in the teaching of science at the secondary school level. A focus on inquiry-driven methods consistent with current standards in science education, uses of technology and relevant software, teaching strategies, assessment, inclusion of special student populations, and development of science literacy with an emphasis on the teacher-as-learner. Includes field experience. PREREQ: ESC 501 or the equivalent course in psychological foundations of education; a 3.0 GPA overall; and Departmental permission.

ESC 520: Teaching Business Subjects in Middle and High School. 3 hours, 3 credits. Methods and materials for teaching business subjects at the middle and high school levels. Curriculum development; current standards; lesson planning; instructional strategies; uses of technology; problem solving; assessment; inclusion of special populations; and literacy development in business subjects. Includes field experience. A research paper or curriculum project is required. Limited to master's level students seeking initial certification. PREREQ: ESC 501 or equivalent course in psychological foundations of education; 3.0 GPA overall; and Departmental permission.

ESC 522: Teaching English in Middle and High School. 3 hours, 3 credits. Limited to master's level students seeking initial certification. Methods, materials, and assessment for teaching English at the middle and high school levels. Developing academic literacy through English language arts and literature. Curriculum development; use of relevant technology; current standards; instructional strategies; inclusion of students from diverse language backgrounds and students with disabilities. Includes field experience. Students cannot receive credit for both ESC 422 and ESC 522. PREREQ: ESC 501 or the equivalent

course in psychological foundations of education; a 3.0 GPA overall; and Departmental permission.

ESC 524: Teaching Foreign Language in Middle and High School. 3 hours, 3 credits. Limited to master's-level students seeking Initial Certification. Methods, materials, and assessment for teaching foreign languages at the middle and high school levels. Developing communicative competence, academic literacy through the four skills, and cross-cultural awareness in a language other than English. Curriculum development; use of relevant technology; current standards; instructional strategies; inclusion of students from diverse language backgrounds and students with disabilities. Includes field experience. Students cannot receive credit for both ESC 424 and ESC 524. PREREQ: ESC 501 or the equivalent course in psychological foundations of education; a 3.0 GPA overall; and Departmental permission.

ESC (EDR) 529: Language, Literacy, and Educational Technology. 3 hours, 3 credits. Using information technology to support the teaching of literacy to students of diverse language backgrounds and abilities through the content areas. Social, legal, and ethical issues affecting the instructional use of technology. Curriculum development; current standards; inclusion of students with disabilities; and assessment. No prior computing experience is necessary. Includes field experience.

ESC 532: Teaching Mathematics in Middle and High School. 3 hours, 3 credits. Methods and materials for teaching mathematics at the middle and high school levels. Curriculum development; current standards; lesson planning; instructional strategies; uses of technology; problem solving; assessment; inclusion of special populations; and literacy development in mathematics. Includes field experience. A research paper or curriculum project is required. Limited to master's-level students seeking Initial Certification. Students cannot receive credit for both ESC 432 and ESC 532. PREREQ: ESC 501 or the equivalent course in psychological foundations of education; 3.0 GPA overall; and Departmental permission.

ESC 533: Teaching World History in Middle and High School. 3 hours, 3 credits. Theory and practice of curriculum, lesson planning, and national and State standards in middle and high school world history and geography courses. Uses of technology and relevant reviews of software, teaching strategies, assessments, and inclusion of special student populations. Includes supervised field work in middle and high school. PRE- or COREQS: ESC 501 (or equivalent) and/or ESC 502 (or equivalent), 3.0 G.P.A., and a passing score on the New York State L.A.S.T. examination and the C.S.T.

ESC 534: Teaching U.S. History and Government. 3 hours, 3 credits. Introduction to current theory on curriculum, alternate views on scope and sequence, lesson planning, and national and State standards in middle and high school social studies. Uses of technology; relevant software; alternative teaching strategies; different types of assessment; inclusion of special student populations; and literacy development in social studies. Limited to master's-level students seeking initial certification. Includes field experience. Students cannot receive credit for both ESC 434 and ESC 534. PRE- or COREQS: ESC 501 and/or ESC 502 (or equivalent), a 3.0 G.P.A., and passing score on the New York State L.A.S.T. examination. Pass the C.S.T. (Content Specialty Test) and A.T.S.-W. (Assessment of Teaching Skills-Written) before or during course.

ESC 536: Teaching Technology Subjects in Middle and High School. 3 hours, 3 credits. Methods and materials for teaching technology subjects at the middle and high school levels. Curriculum development; current standards; lesson planning; instructional strategies; uses of technology; problem solving; assessment; inclusion of special populations; and literacy development in technology subjects. Includes field experience. A research paper or curriculum project is required. Limited to master's-level students seeking Initial Certification. PREREQ: ESC 501 or equivalent course in psychological foundations of education; 3.0 G.P.A. overall; and Departmental permission.

ESC 562: Teaching Language Arts in Languages Other than English. 3 hours, 3 credits. Limited to master's-level students seeking Initial Certification. Methods, materials, and assessment for developing literacy through language arts and literature in a language other than English at the middle and high school levels. Curriculum development; use of relevant technology and software; current standards; instructional strategies; inclusion of students from diverse language backgrounds and students with disabilities. Includes field experience. PREREQ: ESC 501 or the equivalent course in psychological foundations of education; a 3.0 cumulative Grade Point Average; Departmental permission; and passing score on the New York State L.A.S.T. examination. PRE- or COREQ: ESC 524.

ESC 590: Staff Development Workshop for Teachers. 1-3 hours, 1-3 credits. (May be relected for credit with change of topics.) A workshop for teachers and curriculum specialists in teaching and/or developing curriculum materials for topics in specialized areas.

ESC 595: Internship in Classroom Teaching. One semester full-time, two supervised/mentored experiences of 20 days each (or other Lehman College approved sequences), 1-3 credits. (May be relected once, with advisor's permission.) Designed for graduate students who teach full time, the course provides on-site supervisory visits and a weekly seminar. Assigned in-school activities are required. PREREQ: A grade of B or better in Content Area Teaching Methods course; an overall index of at least 3.0; a passing score on the A.T.S.-W. Teacher Certification Examination; Departmental permission; and approval from the Professional Development Coordinator.

NOTE: This internship requires formal application and approval the semester prior to the course being taken. It is the student's responsibility to check with the Professional Development Coordinator for meeting and application dates early in the prior semester. Credits to be determined in consultation with specific Program Advisor. Must be taken for a minimum of 2 and a maximum of 6 credits.

ESC 596: Student Teaching in the Middle and High School Grades. One semester full-time supervised student teaching, two experiences of 20 days each (or other Lehman College approved sequences), 6 credits. Student teaching in the middle and high school grades, plus a weekly seminar. PREREQ: A grade of B or better in the Content Area Teaching Methods course; an overall index of at least 3.0; a passing score on the A.T.S.-W. Teacher Certification Examination; Departmental permission; and approval from the Professional Development Coordinator.

NOTES: (1) Student teaching on both the middle and high school levels is required for New York State certification in business education, English, social studies, foreign languages, science, mathematics, music, health, and art. New York State may add this requirement for other subjects, so students are advised to consult their advisers in this Department regularly. (2) Student teaching requires formal application and approval the semester prior to the course being taken. It is the student's responsibility to check with the Professional Development Coordinator for meeting and application dates early in the prior semester

ESC 611: Seminar in Secondary and TESOL Education, I. 1 hour, 0 credit. Analysis of problems or practices in secondary school and T.E.S.O.L. teaching. PREREQ: Departmental permission.

ESC 612: Seminar in Secondary and T.E.S.O.L. Education, II. 1 hour, 0 credit. Advanced analysis of problems or practices in secondary school and T.E.S.O.L. teaching. PREREQ: ESC 611; Departmental permission.

ESC (EDE) 700: Psychology in Education, Group Dynamics. 3 hours, 3 credits. A laboratory course using here-and-now experiences in studying interpersonal perceptions, communication networks, group decision-making patterns, leadership, and structure. Development of skills in diagnosing and improving group functioning. PREREQ: Full-time teaching experience.

ESC 701: Advanced Educational Psychology. 3 hours, 3 credits. Current psychological theory and research related to learning. PREREQ: Full-time teaching experience or Departmental permission.

ESC (EDE) 702: Foundations of Education. 3 hours, 3 credits. Studies of critical periods and movements in American education history, with emphasis on social, political, and intellectual developments and the role of leading education theorists as agents of change in education.

ESC (EDE) 703: School and Community. 3 hours, 3 credits. Analysis of the environmental influences on learning, with special emphasis on education as a social process and social institution in an urban setting. A minimum of 10 hours' community field experience is required.

ESC 704: Psychological Foundations of Adult Education, Advanced Educational Psychology. 3 hours, 3 credits. A study of the psychology, special needs, and developmental tasks of adulthood; applications to the teaching of students in continuing and adult education programs. PREREQ: Graduate standing or permission of the chair of the Department.

ESC 705: Methods of Educational Research. 1-3 hours, 1-3 credits. Study of the methods, techniques, and strategies of research. Emphasis on educational research as a unique and necessary discipline and as a tool for solving educational problems. Development of a research proposal on a significant problem in the candidate's field. PREREQ: Departmental permission.

ESC 706: Project Seminar I. 1-2 hours, 1-2 credits. Discussion of methods of measurement and evaluation of teaching and learning. Development of the content and structure of the research project. PREREQ: ESC 705 (ESC 742 for Mathematics Education candidates) with a B or better and Departmental permission. COREQ: ESC 707.

ESC 707: Project Seminar II. 2-3 hours, 2-3 credits. Completion of the research project (begun in ESC 705) related to teaching in the candidate's field. PREREQ: ESC 705 (ESC 742 for Mathematics Education students) with a B or better and Departmental permission. COREQ: ESC 706.

ESC 708: Project Seminar in Curriculum, Materials, and Assessment in Specialized Areas. 3 hours, 3 credits. Development of a culminating curriculum project in candidates' field that includes an analysis of contextual factors; integration of prior coursework and research; theoretical foundations of the discipline; learning goals; assessment plan; design of instruction; technology; analysis of student learning and reflection on teaching practice. PREREQ: Departmental permission.

ESC 709: Workshop in Pedagogy and Classroom Management. 3 hours, 3 credits. Evaluating and dealing with behavioral problems in educational settings; theoretical study, simulation, and application of theory to problems. PREREQ: Provisional Certification and one year of full-time teaching experience.

ESC 710: Education Workshop for Secondary School Teachers. 3 hours, 3 credits. A workshop course designed to aid teachers in dealing with the situations and problems arising in their actual school experience. The activities of the course will vary with the demonstrated needs of the students. PREREQ: Employment as a teacher and undergraduate methods course in secondary education.

ESC 711: Perspectives on Middle School Education. 3 hours, 3 credits. Overview of issues related to school environment in middle childhood education, grades 5-6. Characteristics of middle school students, school organization, and curriculum. Study of experimental programs and current research.

ESC 714: Teaching Art in Middle and High School. 3 hours, 3 credits. Exploration of materials, processes, and techniques appropriate for teaching art for middle and high school students. Students design art experiences that incorporate expression, response, art history, and culture. Includes field experience. PREREQ: EDE 732.

ESC 720: Reading and Reading Materials for Adolescents. 3 hours, 3 credits. Remedial and developmental methods of reading instruction for teachers and reading specialists. Selecting, developing, and using appropriate materials.

ESC 721: Literature for Middle and High School Students. 3 hours, 3 credits. An exploration of literature--both classical and contemporary--relevant to middle and high school settings. The role of such literature in the secondary-school curriculum, with particular attention to literary response and its assessment. Review and analysis of selected related research. PREREQ: Permission of instructor.

ESC 722: Teaching Communication Skills in the Content Areas. 3 hours, 3 credits. An examination of the techniques, strategies, and procedures for developing in students the ability to improve their skills in writing, speaking, and listening in the content areas. Review and analysis of selected research and instruction in a variety of pedagogic techniques. PREREQ: Permission of Program Adviser.

***ESC 723: Teaching Reading in the Content Areas.** 3 hours, 3 credits. An examination of programs, strategies, and procedures for developing in students the ability to read books, articles, and other study materials in the content areas. Review and analysis of selected research related to content area reading. PREREQ: Provisional certification in a secondary-school subject, or permission of instructor.

ESC 724: Methods of Teaching Writing in Middle and High School. 30 hours plus confs. and group activities, 3 credits. Consideration of methods of teaching composition in the middle and high school English classroom, with attention to the linguistic, cognitive, and rhetorical theories that generate current practices in writing instruction. Review and analysis of selected research. PREREQ: ESC 722, ENG 785, or the equivalent.

ESC 725: Teaching English Grammar. 3 hours, 3 credits. Study of techniques and procedures for developing in students the ability to analyze the English language and to use standard written English. Consideration of linguistic analysis in the light of current school texts and practices. Includes field experience. PREREQ: Permission of the instructor.

ESC 730: Methods of Teaching English in Middle and High School: Selected Topics. 3 hours, 3 credits. (May be reelected for credit, with adviser's permission, with change of topic, to a maximum of 6 credits.) Strategies and materials for teaching English in middle and high schools with change of topic permitting intensive study of the components of the English curriculum and the research related to them. PREREQ: Permission of the Department chair.

ESC 733: Teaching Music in the Middle Schools. 3 hours, 3 credits. Knowledge, skills, and abilities needed to teach music in middle schools in diverse neighborhoods and the role of national, State, and City standards in the assessments of student achievement. Includes supervised fieldwork in middle schools in a variety of socioeconomic areas. PRE- or COREQ: Admission to M.A.T. program in applied music and music teaching or permission of the Graduate Advisor.

ESC 740: Teaching Mathematics in Grades 7-10. 3 hours, 3 credits. Methods and materials for teaching mathematical concepts and skills in the contemporary intermediate grades that bridge middle- and high-school instruction; models of instruction; strategies for teaching selected topics; problem solving; uses of technology; remedial and enrichment units.

ESC 741: Current Issues in Mathematics Education. 3 hours, 3 credits. Implications of current reform efforts pertaining to the teaching of mathematics, analysis of new curriculum projects and testing programs in the secondary school; use of materials and technological aids or instruction.

ESC 742: Research in Mathematics Education. 3 hours, 3 credits. Review of the research literature; theories of learning mathematics; alternative assessment; technology in mathematics instruction. A research paper is required.

ESC 748: Teaching Problem Solving in Mathematics in Middle and High School. 3 hours, 3 credits. Introduction and application of heuristic techniques to facilitate mathematical problem solving in Grades 7-12; use of technology as a problem-solving tool; assessment. Problems will be analyzed on both teacher and pupil levels. PREREQ: Calculus I and II.

ESC 749: Teaching Mathematics in Grades 11 and 12. 3 hours, 3 credits. Methods and materials for teaching mathematical concepts (e.g., real number system, functions, mathematical induction, sequences and series, analytic geometry, transformations, probability, topics in calculus) in the upper grades of high school; problem solving mathematical modeling; uses of technology (e.g., graphing calculators and computer software), including related social, legal, and ethical issues. PREREQ: Calculus I and II.

ESC 750: Theory and Practice in the Social Sciences. 3 hours, 3 credits. Designed to acquaint the graduate student of Social Studies Education with advanced concepts and methodology of the social sciences and the manners in which these can be taught to high school students. PREREQ: Employment as a teacher and undergraduate methods course in secondary education.

ESC 755: Teaching the Historical Development of Science. 3 hours, 3 credits. Teaching the historical development of science from an interdisciplinary perspective. Critical analysis of different views of scientific knowledge and their implications for the classroom. PREREQ: ESC 502 or 702 and ESC 770.

ESC 759: Foundations of Bilingual/Bicultural Education. 3 hours, 3 credits. Bilingual/bicultural education, including history, goals, models, rationale, legal and legislative basis, linguistic principles, and language evaluation. Current issues and research findings in bilingual/bicultural education will be studied. Includes field experience. PREREQ: ESC 501, 502, or ESC 703 (or an equivalent) and permission of the adviser.

ESC 760: Second-Language Learning and Teaching. 3 hours, 3 credits. The psychological principles of second-language learning with their application to teaching. Similarities and differences between first- and second-language learning and teaching. PREREQ: One course in educational psychology. Includes field experience.

ESC 761: Teaching English as a Second Language to Adolescents and Adults. 3 hours, 3 credits. Methods, materials, and evaluation for developing the literacy skills of speaking, listening, reading, and writing in English for middle childhood, adolescent, and adult English language learners, including reading enrichment and remediation. Curriculum development; use of relevant technology and software; current standards; instructional strategies; inclusion of students from diverse language backgrounds and students with disabilities. Includes field experience.

ESC 762: Methods of Teaching Foreign Languages in Secondary Schools. 1-3 hours, 1-3 credits. (May be reelected for credit, with adviser's permission, with change of topic, to a maximum of 6 credits.) Selected topics reflecting current practices in language education. PREREQ: Provisional certification or permission of the Department chair.

ESC 763: Teaching Literacy through the Content Areas in the Secondary Bilingual Classroom. 45 hours, 3 credits. Methods, materials, and evaluation for teaching literacy through middle and high school level content areas, such as business education, mathematics, science, and social studies in the native language and in English. Curriculum development; use of relevant technology; current standards; lesson planning; instructional strategies; inclusion of special populations; and assessment. Includes field experience. PREREQ: ESC 759 (or an equivalent), a methods course in subject area, and permission of the adviser.

ESC 764-765: Workshop in Modern Materials and Methods of Foreign Language Teaching I and II (Secondary Schools). *Each 3 hours, 3 credits.* (I) Study and discussion of recent research in the field and its application to language teaching. Practices and techniques for developing aural-oral competency and other communication arts and skills. Selection and utilization of materials in the field that meet current objectives in foreign-language teaching. (II) Study and demonstration of audiovisual teaching tools and devices. Preparation and demonstration of teacher-made materials. Newer techniques for evaluating a foreign language in the secondary schools.

ESC 766: Teaching English as a Second Language Through the Content Areas. *3 hours, 3 credits.* Methods, materials, and evaluation for developing the literacy skills of speaking, listening, reading, and writing in English to speakers of other languages through the content areas, including mathematics, science, and social studies. Curriculum development; use of relevant technology and software; current standards; instructional strategies; inclusion of students from diverse language backgrounds and students with disabilities; and assessment. Includes field experience. PRE- or COREQ: ESC 761 (or an equivalent) and permission of adviser.

ESC 767: The Museum as a Resource for Teaching Science. *3 hours, 3 credits.* An introduction to the use of the museum as a resource for teaching and learning science. PREREQ: ESC 502 or 702 and ESC 770.

ESC 768: Education Workshop for Teachers of Students of Puerto Rican and Latino Origin. *3 hours, 3 credits.* A workshop designed to help teachers deal with the situations and problems arising out of their actual school experiences. Emphasis will be placed on the preparation, demonstration, and discussion of instructional materials needed for developing communications skills. PREREQ: Employment as a teacher and a course in methods of teaching in the secondary school.

ESC 769: Latinos in U.S. Schools. *3 hours, 3 credits.* Interdisciplinary study of educational issues affecting Latinos in the United States, with a focus on the urban school setting: educational, historical, literary, linguistic, and sociological sources will be utilized to analyze issues. PREREQ: ESC 501 or 502 (or an equivalent) and permission of the adviser.

ESC 770: Methods of Teaching Science in Secondary Schools: Selected Topics. *1-3 hours, 1-3 credits.* (May be reelected for credit, with adviser's permission, with change of topic, to a maximum of 6 credits.) Strategies for teaching a single science and interdisciplinary science topics at the secondary and postsecondary levels. Emphasis on research related to improving the teaching and learning of science and on techniques and materials that meet the needs of contemporary students. PREREQ: Provisional certification or permission of the Department chair.

ESC 772: Evaluation and Assessment of Student Learning. *3 hours, 3 credits.* Systematic introductory course for graduate students. The fundamentals of evaluation and assessment of student learning in middle and high schools, including: writing objective test items, methods of evaluating and assessing student learning, up-to-date instruments for evaluating and assessing aptitude and achievement in the active, inquiry-based, cooperative classroom, and alternative assessment techniques, including use of portfolio assessment and rubrics.

ESC 775: Problems of Secondary Education in Metropolitan Areas. *3 hours, 3 credits.* Social structures of urban life and their impact on the problems and future forms of the urban secondary school. Critical examination from a variety of viewpoints of major issues in curriculum, methods, pupil achievement, and organization of the secondary school, arising from urbanization. PREREQ: One course in educational foundations.

ESC 776: Multiethnic and Multicultural Education. *3 hours, 3 credits.* Multiethnic and multicultural education, including history, goals, models, rationale, legal, and legislative basis. Current issues and research findings in multiethnic and multicultural education and major ethnic and subcultural groups in urban school settings will be studied. PREREQ: ESC 701, or 702, or 703 (or an equivalent), and permission of adviser.

ESC 777: Philosophy of Education. *3 hours, 3 credits.* Examination of alternative standards of judgment presented in the philosophies of experimentalism, realism, idealism, and existentialism, and in philosophic analysis. Central consideration given to the problems of educational goals and curriculum posed by conflicting philosophies of education.

***ESC 778: History of the American School.** *3 hours, 3 credits.* Public education from the colonial period to the present, with particular emphasis on the interrelationships between education and culture, political, and economic developments.

***ESC 779: European Backgrounds of American Education.** *3 hours, 3 credits.* Cultural and institutional origin of American elementary, secondary, and higher education. Educational interchange between the United States and Europe in the nineteenth and twentieth centuries.

ESC (EDE) 780: Comparative Education. *3 hours, 3 credits.* Comparative study of school organization, curricular practices, and contemporary educational problems in selected foreign countries. Special attention will be given to the study of issues that have cross-cultural dimensions

ESC (EDE) 781: Advanced Studies in Comparative and International Education. *3 hours, 3 credits.* Intensive and specialized studies in selected systems of education, using appropriate methodologies in comparative education. Review and evaluation of the work of bilateral and international technical assistance for educational development. PREREQ: ESC (EDE) 780 or instructor's permission.

ESC 782: Methods of Teaching Business and Technology Education. *Selected Topics. 3 hours, 3 credits.* (May be re-elected for credit, with adviser's permission, with change of topic, to a maximum of 6 credits.) Strategies for teaching courses or special topics in business and technology education in adolescence and adult learning settings. Emphasis on research related to improvement of instruction in business and technology education areas and techniques and materials that meet the needs of contemporary students. PREREQ: Permission of the Department chair.

ESC 785: Methods of Teaching Music in the Secondary School and Adult Education. *3 hours, 3 credits.* Strategies and materials for teaching music in secondary and continuing education settings, reflecting current practices in music education. PRE- or COREQ: Preadmission to the M.A. in Music Education program or permission of the Graduate Adviser in music education.

ESC 788: Curriculum Theory and Design. *3 hours, 3 credits.* Study and analysis of curriculum theories, processes, and trends in middle and high school education. Focus on various philosophical positions as they influence curriculum development in middle and high schools and other educational settings. A curriculum project is required. PREREQ: Graduate standing or permission of the Department chair.

ESC 789: Independent Study in Curriculum Development. *1-3 hours, 1-3 credits.* (May be re-elected for credit, with chair's permission, with change of topic.) This course offers an opportunity for middle and high school teachers and curriculum specialists, under the guidance of a faculty member, to carry out an individual project in developing instructional materials adapted to specific groups. PREREQ: For business and technology education students only, ESC 782, 788, and Departmental permission.

ESC 790: Workshop in Curriculum Materials Development in Specialized Areas. 1-3 hours, 1-3 credits. *(May be reelected for credit, with chair's permission, with change of topics.)* A workshop for teachers and curriculum specialists interested in developing instructional materials for topics in specialized areas.

ESC 797: Student Teaching in T.E.S.O.L. *One or two college-supervised experiences of 20 days each or other Lehman College approved sequences*), 3-6 credits. Practice teaching in T.E.S.O.L. in elementary and secondary education settings or in adult education for both in-service and pre-service teachers. Weekly seminar and assigned in-class activities required. Variable credits depend on teaching experience and certification status. **PREREQ:** Completion of T.E.S.O.L. methods courses with a grade of B or better; an overall index of 3.0 or better; for students in Sequence 1, passing scores on the E.S.O.L. and the E.L.P.A.-C.; for students in Sequence 2, passing scores on the A.T.S.-W, E.S.O.L., and E.L.P.A.-C.; and permission from the Professional Development Coordinator.

Music

Department Chair: Bernard Shockett (Music Building, Rm.315)
Department Faculty: Distinguished Professor: John Corigliano; Distinguished Lecturer: Robert Stewart; Professors: Diana Battipaglia, Marta Ghezzeo, Jack Hyatt, Bernard Shockett; Associate Professors: Alan Hollander, Molly Morkoski; Assistant Professor: Janette Tilley; Lecturers: Cynthia Peterson, Penny Prince; Senior College Lab Technician: Karl Watson; College Lab Technicians: Darina Bejtja, Allan Molnar

M.A.T. PROGRAM IN APPLIED MUSIC AND MUSIC TEACHING

The combined master's degree in applied music and music teaching offers a student with a bachelor's degree who already has developed a professional level of performance ability the opportunity to continue serious study in music while simultaneously developing teaching options. The program is designed to prepare students for K-12 certification for full- or part-time public school careers. Students are supervised in their fieldwork and student teaching by faculty, members in the departments of Music, Early Childhood and Childhood Education, and Middle and High School education. Counseling is provided by Graduate Advisers or Coordinators of the three departments.

Admission Requirements

To be admitted to the program, candidates must meet the following requirements:

- Have earned a bachelor's degree in music from a recognized institution.
- Demonstrate the ability to successfully pursue graduate study (above-average academic achievement in general and in music courses is required).
- Demonstrate, by audition, a professional level of performing ability. Auditions may be arranged by calling the Music Department at 718-960-8247.
- Have taken the following courses or their equivalents (deficiencies must be made up for no credit): Music Theory (12 credits); Form and Analysis (including symphony and concerto) (3 credits); and courses in Music History covering the major periods from 1600 to the present (12 credits).
- Demonstrate, by examinations, proficiency in music theory and history.
- If conditionally admitted, make up not more than 12 credits of specified undergraduate coursework, finishing in no more than three consecutive semesters.

Degree Requirements

The program requires a minimum of 36-39 credits, including 18 credits in music and 18-21 credits in education, as follows:

In Education: ESC 501 (3), ESC 529 (3), ESC 595 (3) or ESC 596 (6), ESC 733 (3), ESC 785 (3), EDE 755 (3).

In Music: With the approval of a Graduate Adviser, 18 credits will be chosen from the following: MSH 700 (3), 750 (6); MST 710 (3), 712 (3), 750 (3); MSP 722 (1), 723 (1), 724 (1), 750 (3).

COURSES IN MUSIC

MSP 720: Performance I. 4 hours, 3 credits. Intensive private instruction in principle instrument or in voice. Participation in at least one department ensemble as assigned. Public performance required. PREREQ: Audition demonstrating a professional level.

MSP 721: Performance II. 4 hours, 3 credits. Continued intensified private instruction in the student's principal instrument or in voice. Participation in at least one department ensemble as assigned. Public performance required. PREREQ: MSP 720.

MSP 722: Vocal Pedagogy. 2 hours, 1 credit. The pedagogy, pathology of the voice. PREREQ: Admission to the M.A.T. program.

MSP 723: Secondary Instrument Laboratory Ensemble I. 3 hours, 3 credits. Study of secondary instruments in an elementary-level performing ensemble. Development of basic teaching, conducting, and composing skills relating to all standard instruments. All students will be required to conduct and coach as well as perform on secondary instruments. PREREQ: Admission to the M.A.T. program.

MSP 724: Secondary Instrument Laboratory-Ensemble II. 3 hours, 3 credits. This course will build on skills developed in MSP 723. PREREQ: MSP 723.

MSP 750: Special Topics in Music Performance. 3 hours, 3 credits (maximum 6 credits). Topics vary from semester to semester. PREREQ: Consent of Department.

MSH 700: Performance Practice from the Baroque to the Present. 3 hours, 3 credits. A study of the historically correct methods of performing music from the Baroque, Classical, Romantic, and Contemporary periods. PREREQ: Professional-level performance ability and 12 hours of music history covering the four musical periods, from 1600 to the present.

MSH 750: Special Topics in Music History. 90 hours, 3 credits. Topics vary from semester to semester. PREREQ: Consent of department.

MST 710: Advanced Musical Analysis. 3 hours, 3 credits. PREREQ: 12 credits of music theory and a 3-credit form-and-analysis course covering standard large forms, including symphony and concerto.

MST 711: Composition. 3 hours, 3 credits. Supervised composition of original scores for both instruments and vocal combinations. PREREQ: 12 credits of music theory and a 3 credit form-and-analysis covering standard large forms, including symphony and concerto.

MST 712: Advanced Electronic Music. 3 hours, 3 credits. The study of state-of-the-art electronic equipment and techniques used in both commercial and concert music. PREREQ: Admission to the M.A.T. program.

MST 750: Special Topics in Music Theory. 3 hours, 3 credits (maximum 6 credits). Topics vary from semester to semester. PREREQ: Consent of department.

Nursing

Chair: Catherine Alicia Georges (Building T-3, Room 209)
Director of Graduate Studies: Helen Lerner (Building T-3, Room 203)
Department Faculty: Professor: Keville Frederickson; Associate Professors: Joan Fleitas, Catherine Alicia Georges, Helen Lerner, Eleanor Lundeen, Martha Velasco-Whetsell; Assistant Professors: Eleanor Campbell, Cassandra Dobson, Pamela Ginex, Susan Kleiman, Victoria Rizzo-Nikou; Lecturers: Alice Akan, Shirlee Cohen, Theresa Lundy, Alsacia Pacsi, Mary Tesoro, Mirian Zavala

The Department of Nursing offers graduate programs in Advanced Nursing, Parent-Child Nursing, Adult Health Nursing, Nursing of Older Adults, and Pediatric Nurse Practitioner. Creative and individualized programs of study are used to meet academic requirements and career objectives of graduate Nursing students. Students elect one functional area: nurse administrator, nurse educator, clinical specialist, or the practitioner (pediatrics only). The programs lead to a Master of Science degree and prepare nurses for advanced practice with a variety of clients in community and health settings. Graduate Nursing students attend classes and seminars on Lehman's campus in the Northwest Bronx. They also have access to selected graduate offerings in other units of the City University. Clinical experience is provided in a variety of settings throughout the metropolitan and tristate area. These include hospitals, community and mental health centers, and other facilities where health care is provided. The graduate Nursing program is fully accredited by the Commission on Collegiate Nursing Education.

M.S. PROGRAM IN NURSING

Admission Requirements*

- Bachelor's degree with a major in nursing from a CCN/NL-NAC accredited college or university.*
- Demonstrate the ability to successfully pursue graduate study, that is, have attained a minimum undergraduate grade average of B in Nursing and also a minimum grade average of B in the undergraduate record as a whole.
- Registered nurse license in New York State.
- Names and addresses of two persons who can attest to the applicant's scholastic or professional performance. One reference must be from a former instructor or academic adviser and the second from a recent employer or supervisor.
- Interview with a member of the graduate curriculum committee.
- Successfully complete the Department's Graduate English Proficiency Exam.
- Submit a one-page essay outlining career objectives related to the Master of Science degree in Nursing.

* Registered nurses with a bachelor's degree who majored in other areas should consult the Department.

Curriculum Plan for 43-Credit Master of Science in Parent-Child Nursing, Adult Health Nursing, and Nursing of Older Adults

For Full-Time Students

First Semester (16 credits): NUR 600 (4), **NUR 720 (3), **NUR 721 (3), NUR 732 (6) (Parent-Child), or NUR 738 (6) (Adult), or NUR 752 (6) (Older Adult).

Second Semester (15 credits): **NUR 723 (3), **NUR 726 (3), NUR 748 (3), or NUR 756 (3), or Cognate Course (3), NUR 733 (6) (Parent-Child), or 739 (6) (Adult), or NUR 752 (6) (Older Adult).

Third Semester (12 credits): NUR 749 (6), Elective (3), **NUR 787 (3).

For Part-Time Students

First Year:

Fall (10 credits): HEA 600 (4), **NUR 720 (3), **NUR 721 (3).

Spring (6 credits): **NUR 723 (3), Cognate (3) (NUR 748 or 756 or Clinical Support Elective).

Second Year:

Fall (6 credits): NUR 732 (6), NUR 738 (6), or NUR 751 (6).

Spring (6 credits): NUR 733 (6), NUR 739 (6), or NUR 752 (6).

Third Year:

Fall (6 credits): NUR 749 (6).

Spring (6 credits): **NUR 726 (3), Elective (3).

Fourth Year:

Fall (3 credits): **NUR 787 (3).

Students may attend full- or part-time and have up to five years after matriculation to complete the program.

** Core Courses

Pediatric Nurse Practitioner Curriculum

For Full-Time Students

Fall Semester (12 credits): NUR 720, 766, 721, 768.

Spring Semester (12 credits): NUR 767, 769, 770.

Summer Semester (9 credits): NUR 723, 771.

Fall Semester II (12 credits): NUR 726, 772, 787.

Additional clinical hours as needed to meet regulatory requirements.

CERTIFICATE IN NURSING ADMINISTRATION

Admission Requirements

- A master's degree in Nursing from an accredited college or university.
- Two (2) letters of recommendation.
- An interview with the director of the graduate program or his/her designee.

Students must consult with an adviser in the Nursing Program before starting their certificate program. During their first semester, matriculated students are required to plan their program with an adviser. All students must complete the 15-credit curriculum with a cumulative index of 3.0 or better.

Curriculum

The Certificate in Nursing Administration program consists of a sequence of four courses for a total of 15 credits as listed below:

NUR 748: Nursing Administration of Health Care Systems. 3 hours, 3 credits.

NUR 749: Nursing Practice: Synthesis and Application. 2 hours, lecture; 8 hours, lab, 6 credits.

NUR 730: Nursing Informatics. 3 hours, 3 credits.

NUR 731: Total Quality Management (TQM). 3 hours, 3 credits.

CERTIFICATE IN NURSING EDUCATION

Admission Requirements

- A master's degree in Nursing from an accredited college or university.
- Two (2) letters of recommendation.
- An interview with the director of the graduate program or his/her designee.

Students must consult with an adviser in the Nursing Program before starting their certificate program. During their first semester, matriculated students are required to plan their program with an adviser. All students must complete the 12-credit curriculum with a cumulative index of 3.0 or better.

Curriculum

The Certificate in Nursing Education program consists of a sequence of three courses for a total of 12 credits as listed below:

NUR 756: The Nurse's Role in Professional Development. 3 hours, 3 credits.

NUR 749: Nursing Practice: Synthesis and Application. 2 hours, lecture; 8 hours, lab, 6 credits.

NUR 730: Nursing Informatics. 3 hours, 3 credits.

COURSES IN NURSING

*Courses preceded by an asterisk are not expected to be offered in 2009-2011.

NUR 561: Gender Issues and Stress. 3 hours, 3 credits. The women's movement has produced a variety of social and personal changes for both men and women. This course will review stress theories and their application to some of the developing and current stressors for women and their partners. Consideration given to dual roles, superwoman syndrome, and differing spousal expectations as well as to stress-reduction techniques, such as self-awareness, stress management, and coping strategies.

NUR 600: Biostatistics in Health Research. 3 hours, plus conference, 4 credits. Application of statistical techniques in the analysis of health data. Emphasis on interpretation of basic descriptive and inferential statistics in health research. Includes an introduction to computer software used in the statistical analysis of health data.

NUR 700: Transitional Issues in Nursing. 10 hours (3, lecture; 7, clinical lab), 6 credits. (Open only to non-Nursing baccalaureate graduates with R.N. licensure and permission of Director of Graduate Studies.) This course focuses on the nursing process in the design and delivery of nursing care to clients/families within community settings. The matrices or organizing frameworks of professional nursing practice and the theoretical basis of the nursing process will be explored. Students will be introduced to the conceptual framework of the Department of Nursing as an organizing framework for practice. Various roles of the professional nurse will be analyzed. Clinical practice included.

NUR 720: Concepts and Theories for Advanced Nursing Practice. 3 hours, 3 credits. This course provides a base for graduate Nursing students by analyzing selected conceptual frameworks and theories. By utilizing these concepts and building on knowledge of the nursing process, the student explores a view of human beings, health, and health care. Emphasis on development of those concepts that have particular relevance for research and nursing practice. PREREQ: Successful completion of the Department's Graduate English Proficiency Exam.

NUR 721: Essentials of Clinical Research. 3 hours, 3 credits. This course focuses on inquiry through research. Students will critique research reports and apply the research process as they develop their own proposal. PREREQ: NUR 720, NUR 600, or a graduate-level statistics course.

NUR 723: Strategies for Advanced Nursing Practice. 3 hours, 3 credits. This course introduces theoretical frameworks for advanced practice modalities such as consultation, education, management, collaboration, and independent practice. PRE- or COREQ: NUR 720.

NUR 726: Health Planning and Policy Making: Leadership Issues. 3 hours, 3 credits. An identification and critical analysis of the major issues in leadership, health planning, and policy making that confront members of the healthcare discipline. PRE- or COREQ: NUR 720, 721, and a minimum of one course in the advanced Nursing clinical specialization.

NUR 730: Nursing Informatics. 3 hours, 3 credits. This course focuses on computer technology and its role in the present day nursing practice, applications of computer technology to advance nursing practice and research, and analysis and interpretation of nursing and health related databases.

NUR 731: Total Quality Management (T.Q.M.). 3 hours, 3 credits. Major concepts of total quality management/continuous quality improvement, including process of change, effective teams, and rapid improvement.

NUR 732: Parent-Child Nursing I. 15 hours (3 for lecture; 12, clinical lab), 6 credits. This is the first course in a two-semester sequence focusing on advanced practice in Health Care of Parents and Children. This course will emphasize concept analysis and critical evaluation of nursing theory in clinical applications. Assessment, diagnosis, and intervention will occur with a variety of clients. PRE-or COREQ: NUR 720, NUR 600, NUR 721.

NUR 733: Parent-Child Nursing II. 15 hours (3 lecture and 12, clinical lab), 6 credits. This is the second course in a two-semester sequence that focuses on advanced practice in Health Care of Parents and Children. The emphasis of this course is on intervention with parents, children, and community groups in meeting their healthcare needs. PREREQ: NUR 732.

NUR 738: Adult Health Nursing I. 15 hours (3, lecture and 12, clinical lab), 6 credits. This is the first course in a two-semester sequence focusing on advanced practice in Adult Health Nursing. The course emphasizes analysis of selected concepts of adult health and critical evaluation of nursing theory in clinical applications. PRE- or COREQ: NUR 720, NUR 600, NUR 721.

NUR 739: Adult Health Nursing II. 15 hours (3 lecture, 12 clinical lab), 6 credits. This is the second course in a two-semester sequence that focuses on advanced practice in Adult Health Nursing. The emphasis of this course is on interventions with adults with actual and potential health problems. PREREQ: NUR 738.

NUR 748: Nursing Administration of Healthcare Systems. 3 hours, 3 credits. Cognate course required for nurse administrator role. This course is designed to introduce basic principles and methodologies of organizational management. Topics include organizational structure and management, human resource management, marketing, and budgeting, and quality assurance. Learners are expected to develop familiarity with essential management issues, e.g., organizational structure, management of resources, and quality control.

NUR 749.1: Nursing Practice Synthesis and Application, Section 01, Advanced Nurse Practice Role. 15 hours (3, lecture; 12, clinical lab), 6 credits. Clinical and didactic aspects of this course that prepare the student for advanced nursing practice. PRE- or COREQ: NUR 766 or 767 for Section 01 is related to the area of advanced practice nursing.

NUR 749.2: Nursing Practice Synthesis and Application, Section 02, Nurse Administrator Role. 15 hours (3, lecture; 12, clinical lab), 6 credits. Clinical and didactic aspects of this course prepare the student for a nurse administrator role. COREQ: NUR 748.

NUR 749.3: Nursing Practice Synthesis and Application, Section 03, Nurse Educator Role. 15 hours (lecture 3, clinical lab 12), 6 credits. There are clinical and didactic aspects of this course that prepare the student for the Nurse Educator Role. PRE- or COREQ: NUR 756.

NUR 751: Nursing of Older Adults I. 15 hours (3, lecture; 12 clinical lab), 6 credits. This is the first course in a two-semester course sequence focusing on advanced practice in Nursing of Older Adults. Emphasis is on the interaction between clients and caregivers in their social environment. PRE- or COREQ: NUR 720, NUR 600, NUR 721.

NUR 752: Nursing of Older Adults II. 15 hours (3 lecture, 12 clinical lab), 6 credits. This is the second course in a two-semester sequence focusing on advanced practice in Nursing of Older Adults. Nursing process is used to assess health changes and to design, implement, and evaluate interventions. Emphasis is on the management of elderly clients experiencing acute and chronic health conditions. PREREQ: NUR 751.

NUR 753: Independent Study: Implementation of Research. 3 hours, 3 credits. (May be repeated once with permission of the instructor.) This course is designed to provide the student with an opportunity to develop and implement a research study with faculty guidance. PREREQ: NUR 721.

NUR 754: Cultural Perspectives in Healthcare. 3 hours, 3 credits. Introduction to anthropological concepts related to health and disease, including culturally diverse beliefs about disease etiology and treatment modalities. Emphasis on urban communities; includes a "mini-field experience," during which students will observe client-practitioner behaviors in clinical nursing settings in metropolitan New York. PREREQ: Graduate students, none; undergraduate students, ANT 341.

***NUR 755: Cultural Perspectives in Natality.** 3 hours, 3 credits. The ideology of natality includes perceptions and values about sexuality, childbirth, contraception, and abortion. Natality can be used as a prism through which to view the social and economic history of women in modern America. Changing ideas about childhood, the home and domesticity, women's place in education and in the world of work have all influenced and been influenced by concepts of natality. PREREQ: Graduate students, none; undergraduate students, ANT 341.

NUR 756: The Nurse's Role in Professional Development. 3 hours, 3 credits. Cognate course required for nurse educator role. A course designed to provide an overview of the process of the dissemination of knowledge pertinent to nursing practice. Designed for nurses who are interested in providing continuing education programs, staff development offerings, or in preparing nursing students for clinical practice. Theories of adult learning, course development, preparation of objectives, teaching strategies, and evaluation methods are addressed.

NUR 759: Independent Study: Extra-Clinical Research. 1-6 hours, 1-6 credits. This course is designed to provide the student with an opportunity to develop selected areas of knowledge and expertise in nursing. Specific objectives and description of projects will be developed by students with faculty approval.

NUR 760: Topics in Nursing. 3 hours, 3 credits. (May be reelected once if the topic changes.) The course provides various sections on topics in nursing. For specific topics and sections, consult the Department. PREREQ: Permission of the instructor.

NUR 765: Advanced Health Assessment. 3 hours, 3 credits. Advanced knowledge and classroom practice in physiological and psychosocial assessment skills. PREREQ: Admission to Nurse Anesthesia program (not currently being offered.) COREQ: NUR 766.

NUR 766: Advanced Pathophysiology. 3 hours, 3 credits. This course will examine abnormal biological processes that result in health deviations. Students will select modules specific to their chosen areas of practice. PREREQ: Admission to graduate program in Nursing.

NUR 767: Advanced Pharmacology. 3 hours, 3 credits. This course provides an in-depth understanding of pharmacology across all physiological systems. Mechanism of general drug actions provide a framework for discussion of content-specific drugs. Includes 3 hours' required laws and prescription writing. PREREQ: NUR 766.

NUR 768: Human Science in Nursing. 3 hours, 3 credits. Consideration of selected concepts from human science as they relate to the art and science of nursing. Emphasis is on exploration of the historical evolution of human science in nursing and the potential inherent in that now-accelerated evolution. Implications for nursing practice, education, and research are included. PREREQ: Admission to graduate program in Nursing.

NUR 769: Family Developmental Theory. 3 hours, 3 credits. Concepts common in family theory will be addressed from the perspective of the family as an adaptive system. The goal is to understand what will enhance individual and family functioning. Theoretical models that serve as the foundation for family interventions and family therapy are emphasized. PREREQ: NUR 720.

NUR 770: Advanced Practice I. 220 hours per semester (45 hours, lecture; 185 hours, clinical lab), 6 credits. This clinical course focuses on health assessment of infants, children, and adolescents. Clinical laboratory emphasizes primary health care maintenance and assessment skills for advanced practice nursing. PRE- and COREQ: NUR 766 and 767.

NUR 771: Advanced Nursing Practice II. 230 hours per semester (45 hours, lecture; 185 hours, clinical lab), 6 credits. This clinical course focuses on the management of primary healthcare of infants, children, and adolescents. Clinical laboratory focuses on management of common acute health problems, utilizing advanced practice nursing skills. PREREQ: NUR 770.

NUR 772: Advanced Nursing Practice III. 235 hours per semester (45 hours lecture; 190 hours, clinical lab), 6 credits. This clinical course will focus on the management of infants, children, and adolescents with chronic conditions and special health needs. Legal, ethical, and health policy issues related to the role of the pediatric nurse practitioner are emphasized. PREREQ: NUR 771.

NUR 773: Advanced Health Assessment. 4 hours (2, lecture; 2, lab), 3 credits. Theories and methods of comprehensive assessment of clients across the life span, including physical, psychosocial, and pathophysiological signs and symptoms; refinement of ability to utilize sophisticated techniques to assess, identify, and differentiate deviations from normal; incorporate cultural and developmental variations and needs of client.

***NUR 780: Pharmacology of Anesthesia.** 3 hours, 3 credits. Clinical application of pharmacology to anesthesia, with emphasis on the application of pharmacologic principles of anesthetic and resuscitative processes essential to safe anesthesiology nursing practice. PREREQ: NUR 767.

***NUR 781: Professional Aspects of Nurse Anesthesia.** 3 hours, 3 credits. This course provides an understanding of the regulatory agencies and their guidelines for the practice of nurse anesthesia. The ethical, professional, and legal aspects of nurse anesthesia are explored. PREREQ: Consent of instructor.

***NUR 782: Principles of Anesthesia I.** 3 hours, 3 credits. A study of the mathematical, chemical, physical, and pharmacokinetic principles as they apply to anesthesiology nursing practice. PREREQ: NUR 765 and 766 and consent of the instructor.

***NUR 783: Principles of Anesthesia II.** 3 hours, 3 credits. Continuation of NUR 782, with a focus on scientific bases of anesthesiology nursing practice derived from biochemistry, cell physiology, biologic hazards, mechanisms of anesthesia, and principles of safe practice. Laboratory experiences at various clinical sites included. PREREQ: NUR 782.

***NUR 784: Principles of Anesthesia III.** 3 hours, 3 credits. Integrates physiologic, pathophysiologic, and pharmacologic concepts with anesthesia management. Provides foundation for decision making in planning and implementing anesthesia care individualized to meet specific client needs. PREREQ: NUR 783.

***NUR 785: Principles of Anesthesia IV.** 3 hours, 3 credits. Continuation of principles of anesthesia (I-III) with emphasis on endocrine, renal, and gastrointestinal systems. Principles of anesthesia for the obstetric, pediatric, and geriatric patients. PREREQ: NUR 784.

***NUR 786: Principles of Anesthesia V.** 3 hours, 3 credits. Emphasis on complex clients having emergency surgery resulting from trauma, burns, or drug abuse. Includes anesthesia for patient with cancer, patient undergoing hypotensive anesthesia technique, plastic surgery, otolaryngological surgery, cardiac surgery, and ambulatory surgery. PREREQ: NUR 785.

NUR 787: Advanced Professional Seminar. 3 hours, 3 credits. This course provides the experience for graduate Nursing students to complete and present their clinical research project, including formal presentation (oral and written) of the results.

***NUR 799: Master's Project Seminar.** 1 hour, 1 credit. The master's project seminar guides students to develop a proposal for their final project and to ready it for implementation. The final projects are based on specific areas of interest that have been identified in previous graduate courses and are congruent with master's project objectives. PREREQ: At least the first advanced nursing specialization course (NUR 732, 738, or 751); PRE- or COREQ: NUR 721.

Physics and Astronomy

Chair and Adviser: Dimitra Karabali (Gillet Hall, Room 131A)
Department Faculty: Distinguished Professor: Eugene Chudnovsky;
Professors: Christopher C. Gerry, Dimitra Karabali; Associate Profes-
sors: Dmitry Garanin, Daniel Kabat; Senior College Laboratory
Technician: Elpidio Jiménez

The Department of Physics and Astronomy offers courses designed to meet the needs of students in the programs for secondary-school teachers of natural science.

COURSES IN PHYSICS AND ASTRONOMY

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

PHY 601: Advanced General Physics. 3 hours, 3 credits. (Intended primarily for graduate students in the teaching of science and mathematics.) A mature synthesis of basic concepts in classical and modern physics. PREREQ: One year of college physics.

PHY 602: Modern Physics. 5 hours (3, lecture; 2, lab), 4 credits. (Intended primarily for high school science and mathematics teachers, but open to other qualified graduate students.) Study of various aspects of the physics of the twentieth (and twenty-first) century. Emphasis will be on the theory of relativity and on quantum physics, including applications to technology. Relevant laboratory exercises will be performed. PREREQ: Two semesters of general physics and one semester of calculus.

***PHY 603: Selected Topics in Physics for Biology Students.** 3 hours, 3 credits. (Intended primarily for graduate students in the teaching of biology and general science.) Particular emphasis will be placed on the discussion and demonstration of those basic phenomena and laws especially useful to teachers of biology and general science. PREREQ: One year of college physics.

PHY 605: Physics for Teachers. 4 credits, 5 hours (3, lecture; 2, lab). Fundamental physics concepts and related pedagogical practices. General principles, including symmetry and topology, dimensionality and phase space, determinism and chaos, quantum uncertainty and relativity, that underlie physical phenomena. Historical perspectives on physical sciences and their impact on society.

AST 601: Astronomy of Solar Systems. 5 hours (3, lecture; 2, lab), 4 credits. (Intended primarily for high school science and mathematics teachers, but open to other qualified graduate students.) Nature, origins, and evolution of the sun, planets, and components of the solar system. Laboratory experiments and observations are integrated with lectures. A research paper is required. PREREQ: One year of college physics (or permission of the instructor).

AST 602: Stellar Astronomy. 5 hours (3, lecture; 2, lab), 4 credits. (Intended primarily for high school science and mathematics teachers, but open to other qualified graduate students.) Stars, interstellar matter, and stellar systems. Pulsars and laws of motion and gravitation. Techniques of astronomical observation. Basic concepts of astrophysics. Stellar evolution; special systems, including pulsars, black holes, and galaxies. Basic cosmology. Laboratory experiments and observations are integrated with lectures. A research paper is required. PREREQ: One year of college physics (or permission of the instructor).

Political Science

Chair and Adviser: Tomohisa Hattori (Carman Hall, Room 358)
Department Faculty: Professors: Ira Bloom, Stanley Renshon; Associate Professors: Young Kun Kim, Donna Kirchheimer; Assistant Professors: Tomohisa Hattori, Jeannette Graulau

The graduate courses in Political Science are designed to enrich the background of teachers of social studies and the humanities. These courses will develop an understanding of the democratic process, the U.S. political system, and global political change.

COURSES IN POLITICAL SCIENCE

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

***POL 501: The United States in World Affairs.** 3 hours, 3 credits. This course will analyze the most important political, military, and economic problems in the international competition for power and order, alliances, the East-West struggle, and the balance of power; war; nationalism and colonialism; diplomacy; the United Nations; regionalism; and problems of foreign aid and international trade.

POL 502: Government and Politics in the United States. 3 hours, 3 credits. Selected problems: federalism, civil liberties, parties and pressure groups, Congress, the Presidency, and the Supreme Court.

***POL 503: Introduction to the Theory of Socialism and Communism.** 3 hours, 3 credits. Selected problems in the origin and development of theory in the tradition of Marx, Engels, Lenin, and other socialist thinkers.

POL 504: Constitutional Law. 3 hours, 3 credits. Introduction to the study of the U.S. Constitution and key Supreme Court decisions bearing on equality, procedural law, federalism, the separation of powers, rights and liberties.

***POL 505: Problems of Stability in Constitutional Democracies.** 3 hours, 3 credits. Comparison and contrast of contemporary constitutional democracies, such as the U.S., the United Kingdom, France, and the German Federal Republic, with the focus on the sources of political stability and instability.

POL 610: Western Political Thought. 3 hours, 3 credits. The basic ideas and systems of western political thought from Plato through Marx.

POL 630: Contemporary Comparative Government. 3 hours, 3 credits. Government structures, ideological foundations, and the functioning of political institutions in selected European states.

POL 651: Urban Politics and Government. 3 hours, 3 credits. The government of modern cities, including New York City, its role in the metropolitan area, and its relationship to the local and national government. The impact of economic and social forces on the political process.

POL 660: International Politics. 3 hours, 3 credits. The basic factors in international politics and the struggle for power and order in world politics.

POL 703: Schools, Communities, and the Politics of American Public Education. 3 hours, 3 credits. The analysis of social and political influences on education policy and institutions. The impact of interaction among local, state, and national governments and interest groups upon education policy. PREREQ: POL 166 or equivalent.

Psychology

Chair and Adviser: Alan Kluger (Gillet Hall, Room 113)
Department Faculty: Professors: Alan Kluger, Fred D. Phelps; Associate Professors: Jean Bresnahan, David Manier, John McDonald, Vincent Prohaska, Kevin Sailor, Suzanne Yates; Assistant Professors: Keith Happaney, Gisela Jia, Humberto Lizardi, Ruby S.C. Phillips, Anne Reid, Sarah Shuwairi; Lecturer: Minda Tessler

The Department of Psychology offers courses for students in the master's programs for elementary and secondary-school teachers.

COURSES IN PSYCHOLOGY

**Courses preceded by an asterisk are not expected to be offered in 2009-2011.*

***PSY 531: Psychology of the Physically Handicapped.** 3 hours, 3 credits. Personality characteristics and problems arising among various types of the physically handicapped, such as the blind, the partially sighted, the deaf, the hard-of-hearing, the crippled, cardiacs, speech deviates, those of lowered vitality, and the cerebral palsied as well as those having multiple handicaps. Attention will be given to educational and social problems, mental tests, and the mental hygiene of the atypical, not only in the home environment but also in hospitals, convalescent homes, rehabilitation centers, and schools. PREREQ: General psychology.

***PSY 541: The Psychology of Adolescence.** 3 hours, 3 credits. Study of psychological development in adolescence. Needs, interests, emotions, and attitudes; individual differences in growth and development patterns. Current research findings reviewed and applied to the problems of secondary-school teaching. PREREQ: General psychology and 3 additional credits in psychology.

***PSY 605: Abnormal Psychology-Advanced Course.** 3 hours, 3 credits. Facts and theories about the etiology of mental disorders. Consideration of deviations commonly found in the school population, such as mental retardation and delinquency. PREREQ: Undergraduate abnormal psychology or psychology of personality.

***PSY 676: Psychology of Personality.** 3 hours, 3 credits. An overview of various approaches to the understanding of personality. Consideration of the major theories of personality development. PREREQ: General psychology.

***PSY 720: Developmental Psychology I.** 3 hours, 3 credits. Theory and research on behavioral development throughout the life span. Physical, mental, emotional, social, and sexual aspects of psychological development from infancy to old age. PREREQ: General psychology

Social Work

Chair: Professor Norma Phillips (Carman Hall, Room B18)
 Director of Social Work Program: Carl Mazza (Carman Hall, Room B18)

Department Faculty: Professors: Norma Phillips; Associate Professors: Graciela Castex, Sharon Freedberg, Patricia Kolb, Heidi Heft LaPorte; Assistant Professors: Joy Greenberg, Richard Holody, Jessica Kahn, Alissa Mallow, Carl Mazza, Evan Senreich, Bryan Warde, Brenda Williams-Gray; Lecturers: Alex Jonathan, Jill Gerson

M.S.W. PROGRAM IN SOCIAL WORK

The Master of Social Work (M.S.W.) Program prepares social workers to assume positions of leadership in public and voluntary sector social service agencies located in urban areas. All students in the program develop advanced integrated social work skills, including direct practice with individuals, families, groups, and communities; supervision; administration; research; and policy practice.

Students who complete this program and earn their M.S.W. degree will also have completed all the educational requirements and be eligible to take the New York State licensing exams for social work (L.M.S.W. and L.C.S.W.; the curriculum for each program is the same).

NOTE: Students matriculated in Social Work may request transfer credits only toward the special topics/elective requirement.

Three tracks are offered:

Track A: 2-Year Full-time

Course		Credits
YEAR ONE		
<i>Fall Semester</i>		
SWK 611	Generalist Practice I	3
SWK 605	Human Behavior and the Social Environment	3
SWK 639	Social Welfare Institutions and Programs	3
*SWK 671	Fieldwork and Seminar I	5
<i>Spring Semester</i>		
SWK 612	Generalist Practice II	3
SWK 606	Human Diversity and the Social Environment	3
SWK 643	Social Welfare Policy Analysis	3
SWK 646	Social Work Research I	3
*SWK 672	Fieldwork and Seminar II	5
YEAR TWO		
<i>Fall Semester</i>		
SWK 713	Advanced Practice in the Urban Environment	3
SWK 707	Understanding Clinical Assessment and Diagnosis	3
SWK 727	Supervision in Agency-Based Practice	3
*SWK 773	Fieldwork and Seminar III	5

SWK 680	Special Topics in Social Work	3
	OR one elective from SWK 681-686	

Spring Semester

SWK 714	Advanced Practice in the Urban Environment II	3
SWK 729	Administration in Urban Agencies	3
SWK 745	Social Welfare Policy Practice	3
SWK 747	Social Work Research II	3
*SWK 774	Fieldwork and Seminar IV	5

*Students are required to complete 3 full days (300 hours) of fieldwork placement each semester.

Track B: 3-Year Extended Program

Extended students are matriculated students and are subject to the same admissions process as full-time students. Extended students complete the first-year curriculum in two years and take the second year on a full-time basis.

Track C: Advanced Standing Program

Students complete only the second year of the M.S.W. Program.

No credit is offered for life experience in any track.

Admission Requirements for All Tracks:

Candidates must:

- Hold a bachelor's degree from an accredited college or university, including 45 liberal arts credits;
- Have attained a minimum undergraduate grade average of 3.0;
- Submit an application to the program, including a personal statement related to the student's career goals and preparation for this program and three letters of recommendation addressing applicant's suitability for the social work profession and preparedness to enter a rigorous academic program, at least two of which should be from college faculty or professionals in fields related to social work;
- Interview with a member of the graduate faculty.

Admission Requirements for Applicants to Track C, Advanced Standing Program

In addition to the above, candidates must:

- Have completed a bachelor's degree with a Social Work major from a Social Work program accredited by the Council on Social Work Education;
- Have attained a minimum 3.2 cumulative index in the major;
- Include, among the three references, one reference from the advisor in the baccalaureate Social Work Program, or from the Program Director.
- Applicants for Advanced Standing must provide course descriptions for courses in the undergraduate Social Work major; the Graduate Advisor will determine exemption from courses in the Year One curriculum.

Selection Process

- The Admissions Committee, consisting of the Social Work Graduate Advisor, Program Director, and at least two full-time faculty members, will review completed applications. Applications will be evaluated on:

- Academic history;
- Quality of personal statement, including degree of self-awareness, conceptual ability, understanding of the social work profession, and ability to communicate in writing;
- References.

Grade Requirements: Probation and Continuation Criteria

Academic Probation

Graduate students whose G.P.A. falls between 2.7 and 3.0 will be placed on academic probation. Students on academic probation must raise their G.P.A. to 3.0 within the next semester in order to continue in the M.S.W. program. Graduate students whose G.P.A. remains below 3.0 at the end of the probationary semester will be allowed to continue in the M.S.W. program only upon successful appeal to the Graduate Studies Committee.

Continuation

Graduate students whose G.P.A. falls below 2.7 will not be eligible for probation and will not be permitted to continue in the M.S.W. program. These students may only continue in the M.S.W. program upon successful appeal to the Graduate Studies Committee. Students who receive less than a C in Fieldwork and Seminar (SWK 671, 672, 773, 774) may only continue in the M.S.W. program upon successful appeal to the Graduate Studies Committee. Students who receive a failing grade in a course may not continue in any course for which the failed course is a prerequisite. They may enroll in the class for which they received the failing grade in the semester in which it is offered if their G.P.A. meets the criteria for probation and continuation.

COURSES IN SOCIAL WORK

Note: All 3-credit M.S.W. courses are 3-hour hybrid courses, requiring 2 hours of classroom instruction and 1 hour of graded asynchronous learning each week.

SWK 605: Human Behavior and the Social Environment. 3 hours, 3 credits. Examination of individuals, families, groups, and communities in relation to human biological, psychological, social, spiritual, and cultural factors. Theories and knowledge emphasizing critical life events from conception through later adulthood will provide a coherent framework for viewing human beings developing over time.

SWK 606: Human Diversity and the Social Environment. 3 hours, 3 credits. Exploration of theoretical perspectives of developmental processes as well as interactions at all levels of social organization. Impact of life situations, the physical environment, and social processes on client systems in the urban environment. Self-examination of one's values and ethics. PREREQ: SWK 605.

SWK 611: Generalist Social Work Practice I. 3 hours, 3 credits. Introduction to generalist social work practice within a life model framework, including skills and techniques, integrated with professional values and ethics, for the beginning phase of generalist practice. COREQ: SWK 671.

SWK 612: Generalist Social Work Practice II. 3 hours, 3 credits. Generalist social work practice within an ecological systems perspective; emphasis is placed on skills and interventive strategies with populations-at-risk during the middle and ending phases of practice. Case management skills in urban organizations. PREREQ: SWK 611; COREQ: SWK 672.

SWK 639: Social Welfare Institutions and Programs. 3 hours, 3 credits. History of social services in the United States and overview of services in key contemporary fields of practice are studied through the lens of social justice and professional ethics. Special attention to social welfare policies that impact negatively on populations-at-risk in urban environments.

SWK 643: Social Welfare Policy Analysis. 3 hours, 3 credits. Understanding and analyzing social welfare policies, especially those negatively impacting on urban populations. Empowerment of students to act as agents of change in the pursuit of social justice within agency and societal systems. PREREQ: SWK 639.

SWK 646: Social Work Research I. 3 hours, 3 credits. Social work research skills, methods, and processes needed to conceptualize social problems; research project design; critical evaluation of research designs. Utilization of social work research to alleviate conditions contributing to the oppression of at-risk populations in an urban environment.

SWK 671: Fieldwork and Seminar I. 20 field, 1 lecture, 5 credits. 300-hour supervised internship in a social service agency as arranged by the Program. Students integrate social work knowledge, values, and skills as they provide culturally sensitive services to diverse urban populations, and particularly to populations-at-risk. Integration of classroom content with agency practice. COREQ: SWK 611.

SWK 672: Fieldwork and Seminar II. 20 field, 1 lecture, 5 credits. 300-hour supervised internship continued in the same social service agency as in SWK 671. Students further develop knowledge, values, and skills in accordance with social work ethics as they provide increasingly complex services to diverse urban populations, particularly to populations-at-risk. Integration of classroom content with agency practice. PREREQ: SWK 671; COREQ: SWK 612.

SWK 680: Special Topics in Social Work. 3 hours, 3 credits. A variable topics course that enables students to pursue subjects particular to their interest. Course offerings will represent a range of issues relevant to social work practice in urban settings. Topics to be announced.

SWK 681: Social Work with Immigrants. 3 hours, 3 credits. Circumstances faced by individuals and groups that have immigrated, or will immigrate, to cities in the U.S.; diverse reasons that lead people to leave their homelands. Common and unique challenges of resettlement in the U.S. Clinical social work interventions and policy issues will be explored.

SWK 682: The Criminal Justice System and its Impact on Urban Families. 3 hours, 3 credits. Examination of the U.S. criminal justice system in the context of social policy as well as intended/unintended consequences of policies for vulnerable urban populations. Knowledge, skills, and values for social workers providing clinical services to people transitioning from prison, their families, and their communities, and for the development of quality reentry programs.

SWK 683: Issues in Urban Child Welfare. 3 hours, 3 credits. Understanding interrelationships between clinical social work practice and social welfare policies in the field of urban child welfare. Exploration of topics, such as child abuse and neglect, foster care, kinship care, adoption, and day care from historical and contemporary political, cultural, legal, and social work perspectives.

SWK 684: Mass Violence: Dynamics of Helping Urban Populations. 3 hours, 3 credits. Role of the social work profession in helping urban populations vulnerable to mass violence and terrorism, and those who have been affected by it. Clinical interventions with people experiencing trauma, preventive strategies, and self-care for social workers are studied, as are social welfare policies and issues related to social justice.

SWK 685: Gender Issues and the Practice of Social Work. 3 hours, 3 credits. Examination of the ways in which sex roles, gender relations, and identity development are constructed and experienced by individuals in contemporary urban societies. Issues emerging from the intersection of ethnicity, race, class, and sexuality with gender and their implications for clinical social work practice are explored.

SWK 686: Social Work Practice with Urban Older Adults. *3 hours, 3 credits.* Study of knowledge, values, and skills required for clinical, supervisory, administrative, and policy practice in diverse urban gerontological social work settings.

SWK 707: Understanding Clinical Assessment and Diagnosis. *3 hours, 3 credits.* Definitions of mental health and mental illness in various cultures; assessment, DSM-IV-TR diagnosis, and clinical interventions. Implication of social welfare policies for clinical practice. PREREQ: SWK 606; COREQ: SWK 713, SWK 727, SWK 773.

SWK 713: Advanced Social Work Practice in the Urban Environment I. *3 hours, 3 credits.* First course in a two-semester advanced integrated practice sequence. Empowerment approach with urban populations-at-risk. Emphasis on intervention in a larger community context. PREREQ: SWK 612; COREQ: SWK 707, SWK 727, SWK 773.

SWK 714: Advanced Social Work Practice in the Urban Environment II. *3 hours, 3 credits.* Builds on the application of advanced social work practice skills, knowledge, and values. Deepens understanding of the social worker's role in mobilizing power and building relationships with diverse systems of various sizes. Particular attention to content on multiculturalism, diversity, social justice, value dilemmas, and social change issues. PREREQ: SWK 713; COREQ: SWK 729, SWK 745, SWK 747, SWK 774.

SWK 727: Supervision in Agency-Based Practice. *3 hours, 3 credits.* Principles of agency-based supervision in a variety of practice settings. Administrative, clinical, and educational functions; concepts of power, authority, and accountability; ethical and clinical issues; skills and self awareness; staff development; and evaluation. COREQ: SWK 713, SWK 707, SWK 773.

SWK 729: Administration in Urban Agencies. *3 hours, 3 credits.* Administration of public and private urban social services agencies responding to the needs of diverse urban clients. Designing and structuring service organizations; funding sources; developing and maintaining a diverse staff; understanding the relationship of the organization to the community; analyzing and evaluating relevant policies; and examining ethical dilemmas. PREREQ: SWK 727; COREQ: SWK 714, SWK 745, SWK 747, SWK 774.

SWK 745: Social Welfare Policy Practice. *3 hours, 3 credits.* Influencing, formulating, and advocating for social welfare policies that are culturally relevant, consistent with the value of social justice, and ensuring that social services meet the needs of recipients. Particular emphasis on impacting policies affecting urban populations at risk. PREREQ: SWK 643; COREQ: SWK 714, SWK 729, SWK 747, SWK 774.

SWK 747: Social Work Research II. *3 hours, 3 credits.* Design of research instruments, collection of data, and descriptive and inferential statistical analysis of data using S.P.S.S. Submission of a research proposal that seeks to contribute to social work knowledge. The proposal will include an understanding of diversity and/or the needs of at-risk populations in the urban environment. PREREQ: SWK 646; COREQ: SWK 714, SWK 729, SWK 745, SWK 774.

SWK 773: Fieldwork and Seminar III. *20 field, 1 lecture, 5 credits.* 300-hour supervised internship in a practice area different from Fieldwork and Seminar I and II; advanced standing students enter Fieldwork and Seminar III. Development of advanced integrated social work practice through clinical practice, supervision, administration, research, and policy practice assignments. Integration of classroom content with agency practice. PREREQ: SWK 672; COREQ: SWK 707, SWK 713, SWK 727.

SWK 774: Fieldwork and Seminar IV. *20 field, 1 lecture, 5 credits.* Students complete a 300-hour internship in the same agency as SWK 773. Continued learning of advanced integrated social work practice through increasingly challenging assignments in clinical practice, supervision, administration, research, and policy practice. Integration of classroom content with agency practice. PREREQ: SWK 773. COREQ: SWK 714, 729, 745, 747.

Speech-Language-Hearing Sciences

Chair: Acting Chair Stephen A. Cavallo (Speech and Theatre Bldg., Room 226)

Graduate Program Director: Joyce F. West (Speech and Theatre Bldg., Room 131)

Department Faculty: Professors: Deena K. Bernstein, Martin R. Gitterman, John L. Locke, Barbara Weinstein; Associate Professors: Stephen A. Cavallo, Mira Goral, Sandra Levey, Joyce F. West; Assistant Professors: Cheryl Smith Gabig, Liat Seiger-Gardner, Jim Tsiamtsiouris; Lecturers: Jacqueline Aquilino-Jirak, Diana Almodovar, Mary Boylan, Lynn Rosenberg, Christine Rota-Donahue. Clinical Director: Carolyn McCarthy

The Department of Speech-Language-Hearing Sciences offers a graduate program leading to the degree of Master of Arts in Speech-Language Pathology. Registration in all courses requires Departmental permission. Upon admission to the program, students must see the Graduate Coordinator, who will assign an area adviser to guide the student's course of study.

M.A. PROGRAM IN SPEECH-LANGUAGE PATHOLOGY

The M.A. Program in Speech-Language Pathology, through coursework and clinical practicum, fulfills the requirements for the academic portion of the Certificate of Clinical Competence awarded by the American Speech-Language-Hearing Association.

Admission Requirements

- A bachelor's degree (or its equivalent) from an accredited college or university.
- Demonstrate the potential to successfully pursue graduate study, that is, have attained a minimum undergraduate grade average of B+ in the field selected for the graduate major and a minimum grade average of B+ in the undergraduate record as a whole.
- Students accepted for matriculation in the M.A. Program in Speech-Language Pathology must have completed the Lehman College undergraduate major in Speech Language and Hearing Sciences, or its equivalent at another institution. Students who have completed an undergraduate degree in a different major must complete 27 credits of core prerequisite course work: SPV 221, 245, 246, 247, 248, 249, 326, 327, 328 or the equivalent, to be eligible for admission into the M.A. Program in Speech-Language Pathology.
- Two letters of recommendation.
- Potential students must have a personal interview as well as complete a spontaneous writing sample during their department visit. The American Speech-Language-Hearing Association requires that students possess skills in oral and written or other forms of communication sufficient for entry into professional practice.

Degree Requirements

To fulfill the requirements for the Certificate of Clinical Competence awarded by the American Speech-Language-Hearing Association, students must complete a curriculum consisting of at least 53 credits with a minimum of 400 hours of clinical practicum. Students will complete 20 hours of Audiology practicum in order to meet current New York State licensing requirements.

Curriculum in Speech-Language Pathology (53 credits)

- Basic Science and Related Courses (9 credits): SPE 705 (3), SPE 700 (3), and SPE 727 (3).

- Professional Courses (41 credits): SPE 701 (1), 718 (3), 719 (4), 721 (3), 722 (3), 723 (3), 725 (3), 726 (3), 728 (3), 729 (2 semesters, 3 credits each), SPE 730 (2 semesters, 2 credits each), and SPE 734 (2 semesters, 1 credit each), SPE 739 (3), and one elective (3).

Professional Coursework:

SPE 700: Introduction to Research Methods (3 credits)

SPE 701: Professional Issues (1 credit)

SPE 705: Speech Science (3 credits)

SPE 717: Advanced Anatomy, Physiology, and Neurology of Speech (3 credits)

SPE 718: Phonology and Articulation (3 credits)

SPE 719: Audiology for the Speech-Language Pathologist (4 credits)

SPE 721: Early Childhood Language Disorders (3 credits)

SPE 722: Language Disorders in School-Age Children and Adolescents (3 credits)

SPE 723: The Nature, Diagnosis, and Treatment of Fluency Disorders (3 credits)

SPE 725: Diagnostic Techniques in Speech-Language Pathology (3 credits)

SPE 726: Aphasia and Related Disorders (3 credits)

SPE 727: Voice Disorders (3 credits)

SPE 729: Clinical Practicum and Seminar in Speech-Language Pathology (3 credits)

SPE 730: Clinical and Classroom Externship in Speech-Language Pathology (2 credits)

SPE 734: Diagnostic Practicum (1 credit)

SPE 739: Dysphagia (3 credits)

One 3-credit elective course:

A minimum of one elective course: SPE 736: Motor Speech Disorders (3 credits), or SPE 748: Augmentative & Alternative Communication (A.A.C.) (3 credits), or SPE 735: Seminar in Speech-Language Pathology (3 credits).

Bilingual Extension

Students who complete the degree requirements for the M.A. in Speech-Language-Pathology and are interested in obtaining a bilingual extension to the teaching certificate should contact the Department of Middle and High School Education.

Department Grade Requirements/Progression Criteria

To avoid academic probation, students must maintain a minimum G.P.A. of 3.0 throughout their program. Students who achieve a G.P.A. of 2.75 or lower in their first 12 credits cannot continue in the program, subject to appeal. A G.P.A. of 3.0 or greater is required for enrollment in SPE 729 clinical practicum (two semesters) and for enrollment in SPE 730 (two semesters).

Practica Prerequisites, Sequence, and Continuation Criteria

There are three prerequisite courses (SPE 718, 721, 726), one pre-requisite/co-requisite course (SPE 725), and a pre-clinic orientation prior to the initial enrollment in SPE 729 Clinical Practicum and Seminar. Upon completion of 12 credits (with a G.P.A. of 3.0 or greater), students must enroll in SPE 729: Clinical Practicum and Seminar.

Prior to the initial enrollment in SPE 729, students are required to present signed and dated documentation of 25 clock hours of observation of clinical practice conducted and/or supervised by an A.S.H.A.-certified speech-language pathologist.

Students are strongly encouraged to complete all four courses (SPE 718; 721; 726; and 725) prior to initial enrollment in SPE 729, although SPE 725 may be taken as a corequisite.

Students who plan to enroll in the SPE 729 after school (3-6 pm) clinics are required to take SPE 722: Language Disorders in School Age Children and Adolescents as a prerequisite or corequisite.

Students enrolling in their first SPE 729 clinical practicum must attend a half-day clinic orientation session scheduled at the beginning of the semester of their first clinical practicum rotation.

Prerequisites for SPE 730: Clinical and Classroom Externship in Speech-Language Pathology include successful completion of two semesters of SPE 729 and one semester of SPE 734 and completion of coursework: SPE 717, 721, 722, 723, 725, 726.

Clinical Training Sequence

1st Semester Clinical Practicum

- SPE 729. PREREQ: SPE 718, 721, 726, plus PREREQ / COREQ: SPE 725.
- SPE 729 after school (3-6) clinic. PREREQ: SPE 718, 721, 726, plus PREREQ / COREQ: SPE 725, 722.
- SPE 734 (optional). PREREQ: SPE 725.

2nd Semester Clinical Practicum

- SPE 729. PREREQ: SPE 718, 721, 726, plus PREREQ / COREQ: SPE 725.
- SPE 729 after school (3-6) clinic. PREREQ: SPE 718, 721, 726, plus PREREQ / COREQ: 725, 722.
- SPE 734. PREREQ: SPE 725.

3rd Semester Clinical Practicum

- SPE 730 and SPE 734 (optional). PREREQ: Successful completion of two semesters of SPE 729 and at least one semester of SPE 734.

4th Semester Clinical Practicum

- SPE 730 and SPE 734 (optional). PREREQ: Successful completion of two semesters of SPE 729 and at least one semester of SPE 734.

Practica Grading

No student will advance to a second clinical practicum (SPE 729), to a diagnostic practicum (SPE 734), or to a clinical and classroom externship (SPE 730) unless he/she earns a grade of B or better in the previous clinical practicum experience. If a student receives a practicum grade of B- or lower, he/she must re-enroll in the practicum course and earn a minimum grade of B. The student is permitted to enroll in only one additional graduate course during the semester in which he/she is retaking a practicum course.

COURSES IN SPEECH-LANGUAGE PATHOLOGY

*Courses preceded by an asterisk are not expected to be offered in 2009-2011.

SPE 530: Organization of the Speech and Hearing Program in Elementary and Secondary Schools. 3 hours, 3 credits. Problems of organizing and administering a program of rehabilitation in speech and language disabilities in public schools. PREEQ: SPV 326, 327, and 328, and Departmental permission.

***SPE 607: General Descriptive Phonetics.** 3 hours, 3 credits. Phonetic and phonemic analysis.

***SPE 620: Speech Pathology.** 3 hours, 3 credits. Organic, neurological, and psychological conditions underlying major language and speech disorders. Suggested therapeutic procedures.

SPE 700: Introduction to Research Methods. 3 hours, 3 credits. Critical, historical, and experimental methods used in speech-language-voice and audiology research.

SPE 701: Seminar in Professional Affairs. 1 hour, 1 credit. Professional issues surrounding the practice of speech-language pathology and audiology.

***SPE 702: The Nature of Speech, Language, and Communication Systems.** 3 hours, 3 credits.

***SPE 703: Language and Linguistics.** 3 hours, 3 credits. Introduction to the scientific study of language with attention to the major component of linguistic theory: phonetics, phonology, morphology, syntax, semantics, pragmatics, psycholinguistics, and sociolinguistics. This course places emphasis on the multicultural and multilingual differences in the analysis and application of linguistic theory.

***SPE 704: Psychology of Speech.** 3 hours, 3 credits. The acquisition of speech and language; related normal and abnormal adjustive behavior.

SPE 705: Speech Science. 3 hours, 3 credits. An introduction to speech perception and production; includes a review of basic acoustics and resonance models of the supralaryngeal vocal tract; an overview of select anatomical and physiologic principles relating to speech and voice production; and an introduction to acoustic and physiologic measurement of speech and voice. Students will be provided with direct experience in the clinical measurement of speech and voice.

***SPE 706: Experimental Phonetics.** 3 hours, 3 credits. Study of the experimental methods and literature used in research in voice and phonetics. PREREQ: SPE 705.

***SPE 707: Studies in the Regional and Social Dialects of American English.** 3 hours, 3 credits. An investigation of the origins and current status of the varieties of spoken English in the United States. PREREQ: SPE 607 or Graduate Adviser's permission.

***SPE 708: Comparative Phonetics.** 3 hours, 3 credits. The sound systems of selected modern languages compared with those of English. PREREQ: SPE 607 or Graduate Adviser's permission.

***SPE 710: Physiological and Psychological Acoustics.** 3 hours, 3 credits. Theoretical concepts and supporting data of processes of hearing.

***SPE 715: Semantics.** 3 hours, 3 credits. The study of meaning in communication; the evaluative processes underlying speech and language; the representation of information in languages; speech-language relationships; and a survey of semantic theories.

SPE 717: Advanced Anatomy, Physiology, and Neurology of Speech. 3 hours, 3 credits. An overview of the anatomical, physiological, embryological, and neurological bases of speech production across the lifespan; a detailed study of ventilatory, laryngeal, and supralaryngeal structure and function; discussion of physiologic and acoustic instrumentation for speech and voice measurement.

SPE 718: Phonology and Articulation. 3 hours, 3 credits. The normal aspects of articulation and phonology, the factors associated with articulatory and phonological disorders, and the assessment and treatment of articulation and phonological disorders across the life span.

SPE 721: Early Childhood Language Disorders. 3 hours, 3 credits. Assessment of, and intervention with, infants, toddlers, and pre-school-aged children with language disorders. Emphasis on multicultural and multilingual differences, the role of families and caregivers, interdisciplinary views of children with language and communication challenges, and social-emotional and cognitive development related to early childhood language disorders. Focus on communicative processes, phonology, syntax, semantics, narrative skills, pragmatics, emergent literacy, and the environmental effects on language development. Assessment and intervention for children, including autism spectrum, mental retardation, and specific language impairment. PREREQ: None.

SPE 722: Language Disorders in School-Age Children and Adolescents. 3 hours, 3 credits. Language disorders and the cognitive/linguistic processes involved in learning and in-class performance of listening, speaking, reading, and writing; emphasis on the similarities and differences between spoken and written language and the relationship between oral and written language disorders. PREREQ: SPE 721.

SPE 719: Audiology for the Speech-Language Pathologist. 5 hours (3, lecture; 2, lab), 4 credits. Audiological assessment and management of children and adults with hearing loss appropriate for the speech-language pathologist. Course content includes hearing screening across the lifespan, aural rehabilitation, FM amplifier and classroom systems, hearing aids, and educational audiology. Students will be given the opportunity to screen for hearing difficulties during the lab experience. PREREQ: Students must have completed a total of 3 credits in Hearing Science and 3 credits in Audiology on the undergraduate level.

***SPE 722: The Nature of Stuttering.** 3 hours, 3 credits. Theories and research findings relating to the onset, development, and maintenance of stuttering. PREREQ: SPE 620 (or equivalent).

SPE 723: The Nature, Diagnosis, and Treatment of Fluency Disorders. 3 hours, 3 credits. Assessment and intervention with toddlers, preschool-aged children, school-aged children, and adults with fluency disorders. Current theories and research related to the onset and development of fluency disorders across the lifespan. Case studies related to the connection between theory and practice. Emphasis is placed on multicultural and multilingual differences in assessment and intervention.

***SPE 724: Speech Disorders in Cerebral Palsy.** 3 hours, 3 credits. Etiology and impairment of functions as they relate to communication. PREREQ: SPE 620 (or equivalent).

SPE 725: Diagnostic Techniques in Speech-Language Pathology. 3 hours, 3 credits. Theory and practice of tests and testing procedures designed to evaluate articulation, phonology, voice, language, and other communicative disorders in preschool children, school-aged children, adolescents, and adults. Includes assessment procedures to be used with clients from multilingual and multicultural backgrounds. PREREQ: Undergraduate major in speech pathology (or equivalent), or instructor's permission.

SPE 726: Aphasia and Related Disorders. 3 hours, 3 credits. Symptoms, etiology, and management of acquired neurogenic language disorders in children and adults receiving services in educational and healthcare settings. Multicultural issues that may affect diagnosis and treatment are emphasized. Technology used in intervention will be discussed.

SPE 727: Voice Disorders. 3 hours, 3 credits. Etiology, diagnosis, and treatment. PREREQ: SPE 705 AND 717.

SPE 729: Clinical Practicum and Seminar in Speech-Language Pathology. 5 clinical hours, 1 seminar hour, 3 credits. (May be taken up to three times). Supervised clinical practice in the diagnosis and treatment of speech-language disorders: taking of case histories, reviewing medical, clinical, and educational records, developing treatment plans, providing treatment services, preparing clinical documents, and counseling clients regarding their communication disorder. Seminar in theoretical, evidenced-based practices, and issues related to the clinical practice of speech-language pathology. PREREQ: SPE 718, 721, 726. PREREQ/COREQ: SPE 725.

SPE 730: Clinical and Classroom Practicum in Speech-Language Pathology. 4 hours, 2 credits. (May be reelected for credit up to a maximum of 6 credits). Off-campus supervised field placements in clinical and classroom settings. Includes instructional and clinical planning and management, case conferencing, writing and documenting behavioral goals and objectives, and outcome assessments. Students enrolled in classroom practica will be required to obtain the certificates issued in child abuse and child violence by attending the seminars offered by the Division of Education. PREREQ: SPE 717, 721, 723, 725, 726, 729 (4 credits), 734 (2 credits).

***SPE 733: Advanced Diagnostic Techniques in Speech Pathology.** 4 hours (2, lecture; 2, lab), 3 credits. In-depth examination of additional tests and test procedures; observation and practice in test administration and evaluation. PREREQ: SPE 725 or permission of the Program Director.

SPE 734: Diagnostic Practicum. 2 hours, 1 credit. (Must be taken a minimum of two times.) Provides students with clinical experiences in evaluating speech and language disorders of children and adults. PREREQ: SPE 725.

SPE 735: Seminar in Speech-Language Pathology. 3 hours, 3 credits. Special topics and issues in speech-language pathology.

SPE 736: Motor Speech Disorders. 3 hours, 3 credits. The effects of neuromotor disorders on the development of oral-motor and respiratory control for speech and feeding in children; the differential diagnosis of the dysarthrias/apraxia in adults; multidisciplinary assessment and treatment; intervention/management strategies, including home, clinical, and school settings. PREREQ: SPE 717 (Advanced Anatomy, Physiology, and Neurology of Speech) or permission of the Program Director.

SPE 739: Dysphagia. 3 hours, 3 credits. Review of normal and disordered swallowing function (dysphagia) in adults and children. Overview of instrumented and clinical procedures for the assessment of swallowing function. Focus on multicultural issues and attitudes toward disability, food, and feeding behaviors and their potential impact on children and adults with dysphagia; therapeutic techniques to improve swallowing function in children and adults; multidisciplinary approaches to the management of swallowing disorders in various clinical settings. PREREQ: SPE 717 (Advanced Anatomy, Physiology, and Neurology of Speech) or permission of the Program Director.

SPE 748: Augmentative and Alternative Communication (AAC). 3 hours, 3 credits. Description of minimally verbal individuals throughout the lifespan; assessment through standardized and naturalistic methods; selection of appropriate modes, symbols, response methods, devices, and intervention strategies for enhancement of communication in minimally verbal individuals.

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Ann O'Sullivan, *Coord. of International Student Services (Higher Ed. Asst.)*: B.S., M.B.A., Iona Coll.

Eileen Pretzel-Morales, *Fin. Aid Adviser (Higher Ed. Asst.)*: B.A., M.S., Hunter Coll.

Miriam Rivera, *Fin. Aid Counselor (Asst. to Higher Ed. Officer)*: B.A., Lehman Coll.

Javeria Shahab-Chaudry, *Health Educator*: B.S., Sienna Coll.

Michael E. Sullivan, *Dir., Campus Life*: B.A., Stonehill Coll.; M.Ed., Fordham Univ.

Anisha Thomas, *Career Services Coord./Adviser (Higher Ed. Asst.)*: B.A., New York Univ.; M.A., George Washington Univ.

Vincent Zucchetto, *Exec. Asst. to the Vice Pres. of Student Affairs (Higher Ed. Officer)*: B.A., Lehman Coll.

Martin Zwiren, *Dir. of Athletics/APEX (Higher Ed. Officer)*: B.S., Univ. of Dayton; M.S. Ed., Temple Univ.; P.D., Ed.D., Fordham Univ.

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Distinguished Professor, Mathematics & Computer Science

**PERMANENT
INSTRUCTIONAL STAFF
(TEACHING)**

The faculty listing contains the names of the full-time instructional staff as of February 17, 2009.

Ackerman, Evelyn B., *Prof., Hist.*: A.B., Radcliffe Coll.; M.A., Ph.D., Harvard Univ.

Aisemberg, Gabriel, *Assoc. Prof., Biol. Sci.*: M.Sci., Ph.D., Univ. of Buenos Aires (Argentina)

Akan, Alice, *M. Lect., Nurs.*: B.S., Univ. of Washington; M.A., New York Univ.

Alborn, Timothy, *Assoc. Prof., Hist.*: B.A., Ph.D., Harvard Univ.

Alex, Jonathan, *Lect., Soc. Wk.*: B.A., Lehman Coll.; M.S.W., New York Univ. School of Soc. Wk.

Alexanderson, Peter, *Lect., Econ., Acct., & Bus. Adm.*: B.A., M.S., State Univ. of New York at Albany; J.D., Albany Law School

Almodovar, Diana, *Lect., Speech-Lang.-Hearing Sci.*: B.A., Lehman Coll.; M.A., Queens Coll., M.Phil., City Univ. of New York Grad. Center

Anderson, James, *Assoc. Prof., Engl.*: A.B., Washington Univ.; M.S., Columbia Univ.

Aquilino-Jirak, Jacqueline, *Lect., Speech-Lang.-Hearing Sci.*: B.A., M.A., Lehman Coll.

Aguirre-Molina, Marilyn, *Prof., Health Sci.*: B.S., Hunter Coll.; M.S., Ed.D., Columbia Univ.

Avidon, Elaine, *Lect., Early Childh. & Childh. Ed.*: B.A., Univ. of Vermont; M.S., Bank Street Coll.

Bacarella, Flavia, *Asst. Prof., Art*: B.A., State Univ. of New York at Albany; M.A., New School for Soc. Research; M.F.A., Brooklyn Coll.

Badillo, David A., *Assoc. Prof., Lat. Amer. & Puerto Rican Studies*: B.A., Univ. of California at Berkeley; Ph.D., City Univ. of New York Grad. Center

Bailey, Nathalie, *Assoc. Prof., Engl.*: M.A., Hunter Coll.; Ph.D., City Univ. of New York Grad. Center

Bahadourian, Ara John, *Asst. Prof, Cslg., Litrshp., Lit., & Sp. Ed.*: B.A., Baruch Coll.; M.S., Fordham Univ.; M.Ph., Ph.D., Teachers Coll., Columbia Univ.

Bamshad-Alavi, Maryam, *Lect., Biol. Sci.*: B.S., M.S., Ph.D., Univ. of Mass.

Bard, Anne B., *Lect., Journalism, Com. & Theatre*: B.A., M.A., New York Univ.

Battipaglia, Diana M., *Prof., Mus.*: B.S., M.S., Juilliard School; D.M.A., Eastman School of Music

Baumrin, Bernard H., *Prof., Philos.*: B.A., Ohio State Univ.; Ph.D., Johns Hopkins Univ.; J.D., Columbia Univ.

Bautista, Daniel, *Asst. Prof., Engl.*: B.A., Columbia Univ.; M.A., Ph.D., Brown Univ.

Bayne, Gillian, *Asst. Prof., Middle & H.S. Ed.*: B.S., Coll. of New Rochelle; M.A., New York Univ.; M.Phil, Ph.D., CUNY Grad. Center

Baxter, Michael J., *Sr. Coll. Lab. Tech., Biol. Sci.*: B.A., Lehman Coll.

Bayne, Gillian, *Asst. Prof., Middle & High School Ed.*: B.S., Coll. of New Rochelle; M.A., Steinhardt School of Ed., New York Univ.; Ph.D., City Univ. of New York Grad. Center

- Benefo, Kofi**, *Asst. Prof., Soc.*: B.A., Univ. of Ghana; M.A., Univ. of Iowa; Ph.D., Univ. of Mich.
- Bergad, Laird W.**, *Prof., Lat. Amer. & Puerto Rican Studies*: B.A., Univ. of Wisconsin; M.A., Ph.D., Univ. of Pittsburgh
- Berger, Charles**, *Prof., Math. & Computer Sci.*: B.E., Ph.D., Cornell Univ.
- Bernstein, Deena K.**, *Prof., Speech-Lang.-Hearing Sci.*: B.A., Brooklyn Coll.; M.A., Temple Univ.; Ph.D., City Univ. of New York Grad. Center
- Bhaskaran, Sunil**, *Asst. Prof., Env., Geog., & Geol. Sci.*: B.A., M.A., Bangalore Univ.; Ph.D., Univ. of New South Wales
- Blanco, Walter**, *Prof., Engl.*: A.B., Columbia Univ.; A.M., Ph.D., Harvard Univ.
- Bloom, Ira**, *Prof., Pol. Sci.*: B.A., City Coll. of New York; J.D., Harvard Univ.
- Blot, Richard**, *Assoc. Prof., Journalism, Com., & Theatre*: A.B., Fordham Univ.; M.A., Ph.D., New School for Soc. Research.
- Blum, Antoinette**, *Prof., Langs. & Lits.*: A.B., Univ. of California, Berkeley; Ph.D., Yale Univ.
- Bonastia, Christopher**, *Asst. Prof., Soc.*: B.A., Univ. of Virginia; M.A., Ph.D., New York Univ.
- Borrell, Luisa**, *Assoc., Prof., Health Sci.*: D.D.S., M.P.H., Columbia Univ.; Ph.D., Univ. of Michigan.
- Boston, Nicholas**, *Asst. Prof., Journalism, Com., & Theatre*: B.A., McGill Univ.; M.S., Columbia Univ.
- Bouknight, Tamisha**, *Instr., Cslg., Ldrshp., Lit., & Sp. Ed.*: B.A., Mahattan Coll.; M.A., Univ. of Conn.
- Boyar, Andrea**, *Assoc. Prof., Health Sci.*: B.S., M.N.S., Ph.D., Cornell Univ.
- Boylan, Mary**, *Lect., Speech-Lang.-Hearing Sci.*: B.A., M.A., Lehman Coll.
- Bradshaw, Russell P.**, *Assoc. Prof., Middle & H.S. Ed.*: B.A., Wesleyan Univ.; M.Ed., Ed.D., Harvard Univ.
- Bresnahan, Jean L.**, *Assoc. Prof., Psych.*: A.B., Smith Coll.; M.A., Univ. of Houston; Ph.D., Emory Univ.; J.D., Columbia Univ.
- Broderick, Herbert R., III**, *Assoc. Prof., Art*: A.B., Columbia Coll.; M.A., M.Phil., Ph.D., Columbia Univ.
- Brown, Marcia**, *Senior Coll. Lab Tech., Nurs.*: B.A., M.S., Lehman Coll.
- Brown, Melissa C.**, *Asst. Prof., Art*: B.F.A., Rhode Island School of Design; M.F.A., Yale Univ.
- Bryant, Salita S.**, *Asst. Prof., Engl.*: B.S., Georgia Southern Univ.; M.F.A., New York Univ.; M.A., M.Ed., Ph.D., Univ. of Miss.
- Bueno, Etina**, *System & Net. Admin., Math. & Computer Sci. (Higher Ed. Asst.)*: B.A., M.S., Lehman Coll.
- Buckley, Michael**, *Asst. Prof., Philos.*: B.B.A., Baruch Coll.; B.A., Hunter Coll., Ph.D., Emory Univ.
- Bullaro, Grace**, *Assoc. Prof., Engl.*: B.A., City Coll. of New York; M.A., Ph.D., State Univ. of New York at Stony Brook
- Burke, Martin**, *Assoc. Prof., Hist.*: B.A., City Coll. of New York; M.A., Ph.D., Univ. of Michigan
- Callard, Benjamin**, *Asst. Prof., Philos.*: B.A., Brandeis Univ.; M.A., Tufts Univ.; Ph.D., Univ. of California at Berkeley
- Campbell, Eleanor**, *Asst. Prof., Nurs.*: B.S., Alfred Univ.; M.A., M.Ed., Ed.D., Teachers Coll., Columbia Univ.
- Carey, Rosalind**, *Asst. Prof., Philos.*: B.A., Assumption Coll.; Ph.D., Boston Univ.
- Carney, James T.**, *Lect., Journalism, Com., & Theatre*: B.A., Fordham Univ.; M.A., Coll. of New Rochelle
- Case, Claudia W.**, *Asst. Prof., Journalism, Com., & Theatre*: B.A., Auburn Univ. Montgomery; M.F.A., D.F.A., Yale Univ.
- Castex, Graciela M.**, *Assoc. Prof., Soc. Wk.*: B.S.W., Florida International Univ.; M.S.W., Virginia Commonwealth Univ.; Ed.D., Columbia Univ.
- Castro, M. Marsham**, *Lect., Engl.*: B.A., City Coll. of New York; M.A., Lehman Coll.
- Cavallo, Stephen A.**, *Assoc. Prof., Speech-Lang.-Hearing Sci.*: B.S., State Univ. Coll. of New York, Oneonta; M.S., Teachers Coll., Columbia Univ.; Ph.D., Columbia Univ.
- Chatha, Jaspal**, *Asst. Prof., Econ., Acct., & Bus. Adm.*: B.S., M.A., Louisiana State Univ.; Ph.D., New School for Social Research
- Cheng, Hai-ping**, *Asst. Prof., Biol. Sci.*: B.S., M.S., Fudan Univ.; Ph.D., Univ. of Massachusetts at Amherst
- Cheng, Terrence**, *Assoc. Prof. Engl.*: B.A., State Univ. of New York at Binghamton; M.F.A., Univ. of Miami
- Chen-Hayes, Stuart F.**, *Assoc. Prof., Cslg., Ldrshp., Lit., & Sp. Ed.*: B.A., M.Ed., Indiana Univ.; Ph.D. Kent State Univ.
- Choudhary, Amod**, *Asst. Prof., Econ., Acct., & Bus. Adm.*: B.A., State Univ. of New York at Stony Brook; M.B.A., Fairleigh Dickinson Univ.; J.D., Univ. of Buffalo
- Chudnovsky, Eugene**, *Dist. Prof., Phys. & Astron.*: B.S.-M.S., Ph.D., Kharkov Univ. (Ukraine)
- Chung, Kuk-Soo**, *Lect., Econ., Acct., & Bus. Adm.*: B.A., Seoul Natl. Univ., Korea; A.B., Dartmouth Coll.; M.A., Yale Univ.
- Cirace, John**, *Prof., Econ., Acct., & Bus. Adm.*: B.A., Harvard Coll.; LL.B., Stanford Univ.; M.A., Ph.D., Columbia Univ.
- Cockram, Patricia**, *Assoc. Prof., Engl.*: B.S., Georgetown Univ.; M.A., San Francisco State Univ.; M.A., City Coll. of New York; Ph.D., City Univ. of New York Grad. Center
- Colburn, Forrest D.**, *Prof., Lat. Amer. & Puerto Rican Studies*: B.A., Univ. of California, Santa Cruz; M.A., Ph.D., Cornell Univ.
- Collins, William J.**, *Dist. Prof., Engl.*: B.S., Coll. of the Holy Cross; M.A., Ph.D., Univ. of Calif. at Riverside
- Conroy, Thomas**, *Lect., Soc.*: B.A., St. Peter's Coll.; M.A., Univ. of Wisconsin at Madison; Ph.D., Boston Univ.
- Corbin, George A.**, *Prof., Art*: B.A., Oakland Univ.; M.A., Bucknell Univ.; M.A., Ph.D., Columbia Univ.
- Corigliano, John P.**, *Dist. Prof., Mus.*: B.A., Columbia Coll.
- Cutler, Cecelia**, *Asst. Prof., Middle & H.S. Ed.*: B.A., Barnard Coll.; M.A., Ph.D., New York Univ.
- Danzger, M. Herbert**, *Prof., Soc.*: B.A., Yeshiva Univ.; M.A., Ph.D., Columbia Univ.
- Dauben, Joseph W.**, *Dist. Prof., Hist.*: A.B., Claremont Coll.; M.A., Ph.D., Harvard Univ.
- Decker, Corrie**, *Asst. Prof., Afr. and Afr. Am. Studies*: B.A., Bryn Mawr Coll.; M.A., Ph.D., Univ. Calif. at Berkeley
- DelaCruz, Juan**, *Asst. Prof., Econ., Acct. & Bus. Adm.*: B.A., National Autonomous Univ. of Mexico; M.A., M.Phil., Ph.D., New School for Social Research
- Delson, Eric**, *Prof., Anthro.*: A.B., Harvard Coll.; Ph.D., Columbia Univ.
- DeMinco, Sandra**, *Assoc. Prof., Libr.*: B.A., State Univ. of New York at Oneonta; M.A., Hunter Coll.; M.S.L., C.W. Post Coll. of Long Island Univ.
- Demmer, Craig**, *Assoc. Prof., Health Sci.*: B.S.S., Univ. of Natal (South Africa); M.A., Brooklyn Coll.; Ed.D., Columbia Univ.
- Deveaux, Faith**, *Assoc. Prof., Cslg., Ldrshp., Lit. & Sp. Ed.*: B.A., Skidmore Coll.; M.A., Ph.D., New York Univ.
- DiGangi, Mario**, *Prof., Engl.*: A.B., A.M., M. Phil., Ph.D., Columbia Univ.
- DiPaolo, Maria Grazia**, *Prof., Langs. & Lits.*: B.A., Hunter Coll.; M.A., Ph.D., Columbia Univ.
- Dobson, Cassandra**, *Asst. Prof., Nurs.*: B.S., M.S., Lehman Coll.; D.N.S., Columbia Univ.
- Dubetz, Nancy**, *Asst. Prof., Early Childh. & Childh. Ed.*: B.A., Kent State Univ.; M.A., Ohio State Univ.; Ed.D., Teachers Coll., Columbia Univ.
- Dunbar, Clement, III**, *Asst. Prof., Engl.*: B.A., M.A., Occidental Coll.; Ph.D., Columbia Univ.
- Eschenauer, Robert**, *Asst. Prof., Cslg., Ldrshp., Lit. & Sp. Ed.*: B.A., St. Francis Coll., M.S., Ph.D., St. John's Univ.
- Esteves, Carmen C.**, *Assoc. Prof., Langs. & Lits.*: B.A., Univ. of Puerto Rico; Ph.D., City Univ. of New York Grad. Center
- Farrell, Robert**, *Inst., Libr.*: B.A., Columbia Univ.; M.L.S., State Univ. of New York at Buffalo
- Feinerman, Robert P.**, *Prof., Math. & Computer Sci.*: B.A., M.A., Ph.D., Yeshiva Univ.
- Fendelman, Earl B.**, *Assoc. Prof., Engl.*: B.A., Univ. of Chicago; M. Phil., Ph.D., Yale Univ.
- Fernández, Ricardo R.**, *Pres. and Prof., Langs. & Lits.*: B.A., M.A., Marquette Univ.; M.A., Ph.D., Princeton Univ.

- Fernandez, Rogelio**, *Asst. Prof., Early Child. & Childh. Ed.*: B.S., Long Island Univ.; M.A., New York Univ.; Ph.D., Fordham Univ.
- Ferraro, Michael**, *Assoc. Prof., Art*: B.F.A., Syracuse Univ.; M.F.A., Univ. of Massachusetts at Amherst.
- Fields, Judith**, *Asst. Prof., Econ., Acct., & Bus. Adm.*: B.A., M.U.P., Ph.D., New York Univ.
- Fiol-Matta, Licia**, *Assoc. Prof., Lat. Amer. & Puerto Rican Studies*: B.A., Princeton Univ.; M.A., Ph.D., Yale Univ.
- Fisch, Oscar**, *Prof., Econ., Acct., & Bus. Adm.*: M.A., Univ. of Buenos Aires; M.C.P., Harvard Univ.; Ph.D., Univ. of California at Berkeley
- Fisher, William G.**, *Assoc. Prof., Engl.*: B.A., Vanderbilt Univ.; M.A., Ph.D., Univ. of Pennsylvania.
- Fitting, Melvin C.**, *Prof., Math. & Computer Sci.*: B.S., Rensselaer Polytech. Inst.; M.S., Ph.D., Yeshiva Univ.
- Flam, Louis**, *Assoc. Prof., Anthro.*: B.A., Rutgers Univ.; M.A., Ph.D., Univ. of Penn.
- Fleitas, Joan**, *Assoc. Prof., Nurs.*: B.S., Florida State Univ., M.N., Emory Univ., Ed.D., Teachers Coll., Columbia Univ.
- Fletcher, David**, *Asst. Prof., Middle & H.S. Ed.*: B.A., Appalachian State Univ.; M.A., Univ. of Michigan; Ph.D., New York Univ.
- Folsom, Christy**, *Asst. Prof., Early Childh. & Childh. Ed.*: B.S., Brigham Young Univ.; M.S., Oregon Coll. of Ed.; Ed.M., Ed.D., Teachers Coll., Columbia Univ.
- Ford, Madeline**, *Asst. Prof., Libr.*: B.B.A., Baruch Coll.; M.L.S., Rutgers Univ.; M.S. Edu., Baruch Coll.
- Frederickson, Keville**, *Prof., Nurs.*: B.S., Columbia Univ.; M.Ed., Ed.D., Teachers Coll., Columbia Univ.
- Freedberg, Sharon**, *Assoc. Prof., Soc. Wk.*: B.A., City Coll. of New York; M.S.W., State Univ. of New York at Buffalo; D.S.W., Columbia Univ.
- Gafur, Bibi. N.**, *Sr. Coll. Lab Tech., Chem.*: B.S., Lehman Coll.; M.S., City Coll. of New York
- Galli, Nicholas A.**, *Prof., Health Sci.*: B.S., M.S., Brooklyn Coll.; Ph.D., Univ. of Illinois
- Gálvez, Alyshia**, *Asst. Prof., Lat. Amer. & Puerto Rican Studies*: B.A., Columbia Univ.; M.A., Ph.D., New York Univ.
- Ganjian, Iraj**, *Prof., Chem.*: Pharm.D., Tehran Univ.; M.S., Ph.D., Columbia Univ.
- Garanin, Dmitry**, *Assoc. Prof., Phys. & Astron.*: B.S., M.S., Moscow Inst. of Physics & Tech., U.S.S.R.; Ph.D., Moscow State Univ., U.S.S.R.
- Gee, Ka-Chuen**, *Higher Ed. Assoc., Libr.*: B.A., New York Univ.; M.L.S., Columbia Univ.; M.S. Ed., Lehman Coll.
- Georges, Catherine Alicia**, *Assoc. Prof., Nurs.*: B.S.N., Seton Hall Univ.; M.A., New York Univ.; Ed.D., Univ. of Vermont
- Gerry, Christopher C.**, *Prof., Phys. & Astron.*: B.A., M.S., Univ. of Maine; Ph.D., State Univ. of New York at Albany
- Gerson, Jill**, *Lect., Soc. Wk.*: B.A., Univ. of Chicago; M.S.W., Hunter Coll.; D.S.W., City Univ. of New York Grad. Center
- Ghezze, Marta**, *Prof., Mus.*: Ph. D., City Univ. of New York Grad. Center
- Gillison, David A.**, *Assoc. Prof., Art*: M.F.A., Natl. Gallery of Art, Victoria School of Art, Australia
- Ginex, Pamela**, *Asst. Prof., Nurs.*: B.S.N., M.A., Univ. of Pittsburgh; Ed.D., Teachers Coll., Columbia Univ.
- Gitterman, Martin**, *Prof., Speech-Lang.-Hearing Sci.*: B.A., Hunter Coll.; M.A., Lehman Coll.; Ph.D., City Univ. of New York Grad. Center
- Gningue, Serigne M.**, *Assoc. Prof., Middle & H.S. Ed.*: B.S., Univ. of Dakar; M.A., Lehman Coll.; M.Phil., Ph.D., Columbia Univ.
- Goral, Mira**, *Assoc. Prof., Speech-Lang.-Hearing Sci.*: B.A., Tel-Aviv Univ.; M.A., Queens Coll.; Ph.D., City Univ. of New York Grad. Center
- Gorokhovich, Yuri**, *Asst. Prof., Env., Geog., & Geol. Sci.*: M.S., Odessa State Univ.; M.A., Ph.D., City Univ. of New York Grad. Center
- Gottlieb, Barbara**, *Prof., Cslg., Ldrshp., Lit. & Sp. Ed.*: B.A., Univ. of Pittsburgh; M.Ed., Lesley Coll.; Ed.D., Northern Illinois Univ.
- Graulau, Jeannette**, *Asst. Prof., Pol. Sci.*: B.A., Univ. of Puerto Rico, Rio Piedras Campus; Ph.D., Syracuse Univ.
- Greenberg, Joy**, *Asst. Prof., Soc. Wk.*: B.A., Tufts Univ.; M.S.W., M.B.A., New York Univ.; Ph.D., Columbia Univ.
- Gross, Carol**, *Asst. Prof., Early Childh. & Childh. Ed.*: B.S., Columbia Univ.; M.S. Ed., Bank Street Coll.; Ed.D., Teachers Coll., Columbia Univ.
- Guñazú, María**, *Assoc. Prof., Langs. & Lits.*: M.S., Southern Conn. State Coll.; M.A., Ph.D., Yale Univ.
- Gulla, Amanda N.**, *Asst. Prof., Middle & H.S. Ed.*: B.A., M.A., Ph.D., New York Univ.
- Haghighat, Elhum**, *Asst. Prof., Soc.*: B.A., Rutgers Univ.; M.A., Univ. of Texas; Ph.D., Univ. of Maryland
- Halliday, Wayne**, *Lect., Libr.*: B.S., Lehman Coll.
- Handel, Michael**, *Prof., Math. & Computer Sci.*: B.A., Brandeis Univ.; Ph.D., Univ. of California at Berkeley
- Hanges, Nicholas**, *Prof., Math. & Computer Sci.*: B.S., City Coll. of New York; M.S., Ph.D., Purdue Univ.
- Happaney, Keith R.**, *Asst. Prof., Psych.*: B.A., Lehman Coll.; M.A., Ph.D., Univ. of California at Santa Barbara
- Harcourt-Smith, William E.H.**, *Asst. Prof., Anthro.*: B.S.c., Kings Coll. London; M.S.c., Ph.D., Univ. Coll. London.
- Harushimana, Immaculee**, *Asst. Prof., Middle & H.S. Ed.*: B.A., Univ. of Burundi; M.A., Ph. D., New York Univ.
- Hattori, Tomohisa**, *Asst. Prof., Pol. Sci.*: B.A., Sarah Lawrence Coll.; M.A.L.D., Fletcher School of Law & Dipl., Tufts Univ.; Ph.D., Yale Univ.
- Hernandez, Jessica**, *Inst., Libr.*: B.A., Lehman Coll.; M.L.S., Long Island Univ.
- Hoffman, William M.**, *Prof., Journalism, Com., & Theatre*: B.A., City Coll. of New York.
- Hollander, Alan**, *Assoc. Prof., Music*: B.S., Hofstra Univ.; M.A., Long Island Univ.
- Holody, Richard**, *Asst. Prof., Soc. Wk.*: B.A., St. John's Univ.; M.S.W., Columbia Univ.; D.S.W., Yeshiva Univ.
- Honig, Susan**, *Asst. Prof., Econ., Acct., & Bus. Adm.*: B.S., Lehman Coll.; M.S., Pace Univ.
- Hosay, Cynthia K.**, *Assoc. Prof., Health Sci.*: B.A., M.A., Univ. of Michigan; M.A., Ph.D., New York Univ.
- Humpherys, Anne**, *Prof., Engl.*: B.A., Stanford Univ.; M.A., Ph.D., Columbia Univ.
- Hurley, Dene**, *Asst. Prof., Econ., Acct., & Bus. Admin.*: B.S., City Univ. of London; M.S., Univ. of Bath; Ph.D., Northeastern Univ.
- Hyatt, Jack H.**, *Prof., Mus.*: B.F.A., Univ. of New Mexico; M.Mus., D.M.A., Boston Univ.
- Hyman, David**, *Inst., Middle & H.S. Ed.*: B.A., Vassar Coll.; M.A., Manhattanville Coll.
- Ihde, Thomas**, *Assoc. Prof., Langs. & Lits.*: B.A., St. Mary's Univ., Texas; M. Phil., Ph.D., Univ. of Dublin (Trinity Coll.); Dip., Univ. of Ireland, Galway
- Jacobson, Barbara**, *Asst. Prof., Soc.*: B.A., De Pauw Univ.; M.A., Yale Univ. Div. School; Ph.D., Northwestern Univ.
- Jensen, Thomas E.**, *Prof., Biol. Sci.*: B.A., Wartburg Coll.; M.A., South Dakota State Univ.; Ph.D., Iowa State Univ.
- Jervis, James A.**, *Assoc. Prof., Afr. and Afr. Am. Studies*: A.B., Hunter Coll.; Ph.D., Columbia Univ.
- Jia, Xiangdong**, *Asst. Prof., Psych.*: B.A., M.A., Beijing Univ.; M.A., Ph.D., New York Univ.
- Jiménez, Elpidio**, *Sr. Coll. Lab. Tech., Phys. & Astron.*: A.S., Broward Comm. Coll.; B.S., M.S., Lehman Coll.
- Jitianu, Andrei**, *Asst. Prof., Chem.*: B.Sc., M.Sc., Ph.D., Univ. of Bucharest
- Jones, Liesl**, *Assoc. Prof., Biol. Sci.*: B.S., Fordham Univ.; Ph.D., Medical Coll. of Pennsylvania and Hannemann Univ.
- Joseph, Gerhard J.**, *Prof., Engl.*: A.B., M.A., Univ. of Connecticut; Ph.D., Univ. of Minnesota
- Jung, Gwang**, *Assoc. Prof., Math. & Computer Sci.*: B.E., M.E., Kyungpook Nat. Univ.; Ph.D., Univ. of Louisiana, Lafayette

- Kabat, Daniel**, *Assoc. Prof., Phys. & Astron.*: B.S., California Polytechnic State Univ.; Ph.D., Mass. Inst. of Tech.
- Kahn, Jessica**, *Asst. Prof., Soc. Wk.*: B.A., Davidson Coll.; M.S.W., George Warren Brown School of Soc. Wk., Washington Univ.; Ph.D., Columbia Univ. School of Soc. Wk.
- Kamen-Friedman, Michele**, *Asst. Prof., Econ., Acct., & Bus. Adm.*: B.A., Queens Coll.; M.B.A., St. John's Univ.
- Karabali, Dimitra**, *Prof., Phys. & Astron.*: B.S., Univ. of Athens, Greece; Ph.D., Yale Univ.
- Karp, Leon**, *Prof., Math. & Computer Sci.*: B.A., Yeshiva Univ.; M.S., Ph.D., New York Univ.
- Kayaalp, Orhan**, *Assoc. Prof., Econ., Acct., & Bus. Adm.*: B.A., Ankara Univ.; M.B.A., Fairleigh Dickinson Univ.; M.A., Hunter Coll.; M.Phil., Ph.D., City Univ. of New York Grad. Center.
- Keen, Linda**, *Prof., Math. & Computer Sci.*: B.S., City Coll. of New York; M.S., Ph.D., New York Univ.
- Kelly, Angela**, *Asst. Prof., Middle & H.S. Ed.*: B.A., La Salle Univ.; M.A., Ed.M., Teachers Coll., Columbia Univ.; M. Phil., Ph.D., Columbia Univ.
- Kennelly, Edward**, *Prof., Biol. Sci.*: B.A., Colby Coll.; Ph.D., Washington Univ.
- Kim, Young Kun**, *Assoc. Prof., Pol. Sci.*: A.B., Bucknell Univ.; Ph.D., Columbia Univ.
- Kincaid, Dwight T.**, *Prof., Biol. Sci.*: B.A., Pfeiffer Coll.; M.A., Ph.D., Wake Forest Univ.
- King, Jennifer**, *Lect., Libr.*: B.S., State Univ. of New York at Geneseo; M.L.I., Queens Coll.
- Kirchheimer, Donna Wilson**, *Assoc. Prof., Pol. Sci.*: B.A., Univ. of Chicago; M.I.A., Ph.D., Columbia Univ.
- Kleiman, Susan**, *Asst. Prof., Nurs.*: B.S., M.S., Ph.D., Adelphi Univ.
- Klein, Nancy**, *Asst. Prof., Early Childh. & Childh. Ed.*: B.A., Case Western Univ.; M.S., Bank Street Coll.; Ed.D., Teachers Coll., Columbia Univ.
- Kluger, Alan**, *Prof., Psych.*: B.A., M.A., Queens Coll.; Ph.D., City Univ. of New York Grad. Center
- Kolb, Patricia**, *Asst. Prof., Soc. Wk.*: B.A., Butler Univ.; M.S.S.A., Case Western Reserve Univ.; M.A., Ph.D., New School for Soc. Research
- Koranyi, Adam**, *Dist. Prof., Math. & Computer Sci.*: Diploma, Univ. of Szeged (Hungary); Ph.D., Univ. of Chicago
- Kraus, James A.**, *Asst. Prof., Econ., Acct., & Bus. Adm.*: B.S., Cornell Univ.; J.D., Columbia Univ. School of Law
- Kremenitzer, Janet Pickard**, *Asst. Prof., Early Childh. & Childh. Ed.*: B.A., Queens Coll.; M.A., Ed.M., Ed.D., Teachers Coll., Columbia Univ.
- Kunstler, Robin**, *Prof., Health Sci.*: B.A., State Univ. of New York at Albany; M.S., Northeastern Univ.; D. Rec., Indiana Univ.
- Lakic, Nikola**, *Assoc. Prof., Math. & Computer Sci.*: B.S., Univ. of Belgrade; Ph.D., City Univ. of New York Grad. Center
- LaPorte, Heidi Heft**, *Assoc. Prof., Soc. Wk.*: B.A., State Univ. of New York at Oneonta; M.S.W., D.S.W., Yeshiva Univ.
- Larimer, Amy**, *Asst. Prof., Journalism, Com., & Theatre*: B.A., Connecticut Coll.; M.F.A., Univ. of Wisc./Milwaukee
- LaRuffa, Anthony L.**, *Prof., Anthro.*: B.A., City Coll. of New York; M.A., Ph.D., Columbia Univ.
- Lavin, David E.**, *Prof., Soc.*: B.A., Colby Coll.; M.A., Ph.D., New York Univ.
- Lawrence, Alexandria**, *Asst. Prof., Early Childh. & Childh. Ed.*: B.A., Skidmore Coll.; M.A., M.Ed., Ed.D., Teachers Coll., Columbia Univ.
- Lazarus, Marc S.**, *Prof., Chem.*: B.S., City Coll. of New York; M.A., Ph.D., Princeton Univ.
- LeGall, Dina**, *Assoc. Prof., Hist.*: B.A., Tel Aviv Univ.; M.A., Ph.D., Princeton Univ.
- Lerner, Helen M.**, *Assoc. Prof., Nurs.*: B.S., Skidmore Coll.; M.Ed., Ed.D., Teachers Coll., Columbia Univ.; PNP Cert., Hunter Coll.
- Lervold, Anna M.**, *Lect., Lat. Amer. & Puerto Rican Studies*: B.Mus.Ed., Cons. of Mus.; B.S., Coll. of the Sacred Heart, Puerto Rico; M.A., New York Univ.
- Lerzundi, Patricio**, *Prof., Journalism, Com., & Theatre*: B.A., Columbia Univ.; Ph.D., City Univ. of New York Grad. Center
- Leung, Irene S.**, *Prof., Env., Geog., & Geol. Sci.*: B.A., Univ. of Hong Kong; M.A., Ohio State Univ.; Ph.D., Univ. of California, Berkeley
- Levey, Sandra K.**, *Assoc. Prof., Speech-Lang.-Hearing Sci.*: B.A., M.A., Wayne State Univ.; M.A., Stanford Univ.; Ph.D., City Univ. of New York Grad. Center
- Levitt, Jane E.**, *Assoc. Prof., Health Sci.*: B.A., Barnard Coll.; M.P.A., Ph.D., New York Univ.
- Levy, Teresita**, *Asst. Prof., Lat. Amer. & Puerto Rican Studies*: B.A., Rollins Coll.; M.S., Long Island Univ.; M.Phil., Ph.D., City Univ. of New York Grad. Center
- Lewittes, Joseph**, *Prof., Math. & Computer Sci.*: B.A., M.A., Ph.D., Yeshiva Univ.
- Lieberman, Katherine, Sr.**, *Coll. Lab. Tech., Biol. Sci.*: B.A., M.A., Lehman Coll.
- Lizardi, Humberto**, *Asst. Prof., Psych.*: B.A., State Univ. of New York at Binghamton; M.A., Ph.D., State Univ. of New York at Stony Brook
- Locke, John L.**, *Prof., Speech-Lang.-Hearing Sci.*: B.A., Ripon Coll.; M.A., Ph.D., Ohio Univ.
- Loscocco, Paula**, *Assoc. Prof., Engl.*: B.A., Smith Coll.; Ph.D., Boston Coll.
- Lundeen, Eleanor**, *Assoc. Prof., Nurs.*: B.S., Rutgers State Univ.; M.Ed., Ed.D., Teachers Coll., Columbia Univ.; PNP Cert., Hunter Coll.
- Lundy, Theresa**, *Lect., Nurs.*: B.S., M.S., Lehman Coll.
- Maantay, Juliana**, *Assoc. Prof., Env., Geog., & Geol. Sci.*: B.S., Cornell Univ.; M.U.P., New York Univ.; M.A., Hunter Coll.; M. Phil., Ph.D., Rutgers Univ.
- Maldonado, Nancy**, *Assoc. Prof., Early Childh. & Childh. Ed.*: B.A., M.S.Ed., Lehman Coll.; Ed.D., Teachers Coll., Columbia Univ.
- Mallow, Alissa**, *Asst. Prof., Soc. Wk.*: B.A., State Univ. of New York at Stony Brook; M.S.W., D.S.W., Adelphi Univ.
- Manier, David**, *Asst. Prof., Psych.*: B.A., Univ. of Chicago; M. Div., Harvard Univ.; Ph.D., New School for Soc. Research
- Markens, Susan**, *Asst. Prof., Soc.*: B.A., Brandeis Univ.; Ph.D., Univ. of Calif. at Los Angeles
- Marianetti, Marie**, *Assoc. Prof., Hist.*: B.A., M.A., California State Univ., Los Angeles; M.A., Ph.D., Univ. of Southern Calif.
- Martin, Oscar**, *Asst. Prof., Langs. & Lits.*: B.A., Universidad de Deusto-Bilbao; M.A., Ph.D., Univ. of Wisc.
- Martinez, Herminio**, *Prof., Middle & H.S. Ed.*: B.A., Manhattan Coll.; M.S., St. John's Univ.; Ph.D., City Univ. of New York Grad. Center
- Massa, Janis**, *Asst. Prof., Engl.*: B.A., M.A., San Francisco State Univ.; M.A., Ph.D., New York Univ.
- Maxim, Laurentiu**, *Asst. Prof., Math & Computer Sci.*: B.A., M.A., Univ. of Bucharest; Ph.D., Univ. of Penn.
- Maybee, Julie**, *Asst. Prof., Philos.*: B.J., B.A., Carleton Univ.; Ph.D., Cornell Univ.
- Mazza, Carl**, *Asst. Prof., Soc. Wk.*: B.A., Dowling Coll.; M.S.W., D.S.W., Wurzelweiler School of Soc. Wk. Yeshiva Univ.
- McCarthy, Sean**, *Asst. Prof., Art*: B.F.A., Univ. of Texas at Austin; M.F.A., Yale Univ.
- McDonald, John P.**, *Assoc. Prof., Psych.*: B.S., Rutgers Univ.; M.A., Seton Hall Univ.; Ph.D., State Univ. of New York at Stony Brook
- McNamee, Abigail S.**, *Prof., Early Childh. & Childh. Ed.*: B.A., M.Ed., Westminster Coll.; M.S., M. Phil., Ph.D., City Univ. of New York Grad. Center; Ed.D., Univ. of Pittsburgh
- Mendelsohn, Richard L.**, *Prof., Philos.*: B.A., Cornell Univ.; Ph.D., Mass. Inst. of Tech.
- Menéndez, Barbara**, *Assoc. Prof., Health Sci.*: B.A., Univ. of Wisc.; M.P.H., Ph.D., Univ. of Pittsburgh
- Mifflin, Margot**, *Asst. Prof., Engl.*: B.A., Occidental Coll.; M.A., New York Univ.
- Mineka, John C.**, *Assoc. Prof., Math. & Computer Sci.*: B.A., Cornell Univ.; M.A., Univ. of Calif. at Berkeley; Ph.D., Cornell Univ.
- Montero, Oscar**, *Prof., Langs. & Lits.*: B.A., M.A., Ph.D., Univ. of N. Carolina.

- Moran, Madeline H.**, *Prof., Soc.*: B.A., Barnard Coll.; M.A., Ph.D., Fordham Univ.
- Morkoski, Molly**, *Assoc. Prof., Mus.*: B.A., Univ. of N. Carolina; M.A., Indiana Univ.; Ph.D., State Univ. of New York at Stony Brook.
- Morgan, Brian**, *Coll. Lab. Tech., Env., Geog., & Geol., Sci.*: B.A., Lehman Coll.
- Mosak, Richard**, *Prof., Math. & Computer Sci.*: A.B., Ph.D., Columbia Univ.
- Muchnik, Roman**, *Asst. Prof., Math & Computer Sci.*: B.S., Calif. Inst. of Tech.; Ph.D., Yale Univ.
- Munch, Janet Butler**, *Assc. Prof., Libr.*: B.A., Mercy Coll.; M.L.S., Pratt Inst.; D.L.S., Columbia Univ.
- Muñoz-Millanes, José**, *Prof., Langs. & Lits.*: Ph.D., Johns Hopkins Univ.
- Muntzel, Martin**, *Assoc. Prof., Biol. Sci.*: B.S., Lewis & Clark Coll.; M.A., Ph.D., Oregon Health Sciences Univ.
- Murillo, Christina**, *Sr. Coll. Lab. Tech., Biol. Sci.*: B.A., Lehman Coll.
- Murphy, Brian**, *Instr., Math. & Computer Sci.*: B.S., M.S., Lehman Coll.
- Murrell, Anthony**, *Lect., Econ., Acct., & Bus. Adm.*: B.S., Lehman Coll.; M.B.A., Univ. of Phoenix; C.P.A., New York State
- Nadeem, Shehzad**, *Asst. Prof., Soc.*: B.A., James Madison Univ.; Ph.D., Univ. of Calif. at San Diego
- Nathanson, Melvyn B.**, *Prof., Math. & Computer Sci.*: B.A., Univ. of Penn.; M.A., Ph.D., Univ. of Rochester
- Navarro, Alberto**, *Lect., S.E.E.K. Advisement and Counsel.*: A.A., New York City Com. Coll.; B.A., M.A., City Coll. of New York; M.S., Lehman Coll.; Ph.D., New York Univ.
- Ngo-Ngijol Banoum, Bertrade B.** *Asst. Prof., Afr. & Afr. Am. Studies*: B.A., Univ. of Yaoundé (Cameroon); M.Litt., Univ. of Edinburg (Scotland); Ph.D., Univ. of Essex (Engl.)
- Noueihed, Salah**, *Coll. Lab. Tech., Anthro.*: B.A., Lehman Coll.
- O'Connor, Naphtali**, *Asst. Prof., Chem.*: B.Sc. State Univ. of New York at Stony Brook; Ph.D., Univ. of Calif.
- O'Hanlon, Thomas**, *Asst. Prof., Journalism, Com., & Theatre*: B.A., Fordham Univ.
- Pacci, Alsacia**, *Lect., Nurs.*: B.S., Long Island Univ.; M.S., Coll. of Mt. St. Vincent
- Pan, Victor**, *Dist. Prof., Math. & Computer Sci.*: Ph.D., Moscow State Univ. (Russia)
- Pant, Hari**, *Asst. Prof., Env., Geog., & Geog. Sci.*: B.Sc., Tribhuvan Univ. (Nepal); M.Sc., Univ. of Aberdeen (Scotland); Ph.D., Dalhousie Univ. (Canada)
- Papazian, Mary**, *Provost and Prof., Engl.*: B.A., M.A., Ph.D., Univ. Calif. at Los Angeles
- Paull, Michael R.**, *Dean of Adult and Continuing Education and Assoc. Prof., Engl.*: A.B., Univ. of Michigan; M.A., Cornell Univ.; Ph.D., Univ. of N. Carolina
- Pérez, Miguel**, *Prof., Journalism, Com., & Theatre*: B.A., Florida International Univ.; M.S., Columbia Univ.
- Perl, Sondra**, *Prof., Engl.*: B.A., Simmons Coll.; M.A., Ph.D., New York Univ.
- Phelps, Fred D.**, *Prof., Psych.*: B.A., M.A., Eastern New Mexico Univ.; Ph.D., Northwestern Univ.
- Philipp, Manfred H.W.**, *Prof., Chem.*: B.S., Michigan Tech. Univ.; Ph.D., Northwestern Univ.
- Phillips, Esther R.**, *Prof., Math. & Computer Sci.*: B.S., Brooklyn Coll.; M.A., Ph.D., New York Univ.
- Phillips, Norma K.**, *Prof., Soc. Wk.*: B.A., Hunter Coll.; M.S.W., Hunter Coll. School of Soc. Work; D.S.W., Wurzweiler School of Soc. Wk., Yeshiva Univ.
- Phillips, Ruby**, *Asst. Prof., Psych.*: B.A., Pomona Coll.; M.A., Ph.D., Univ. of Ill.
- Piccolomini, Manfredi**, *Prof., Langs. & Lits.*: Laurea, Univ. of Florence (Italy); Ph.D., Harvard Univ.
- Pigliucci, Massimo**, *Prof., Philos.*: B.A., M.S., Univ. of Rome; Ph.D.; Univ. of Ferrara; Ph.D., Univ. of Conn.; Ph.D., Univ. of Tennessee
- Piña-Rosales, Gerardo**, *Assoc. Prof., Langs. & Lits.*: B.A., Queens Coll.; Ph.D., City Univ. of New York Grad. Center
- Pinhasi-Vittorio, Limor**, *Asst. Prof., Cslg., Ldrshp., Lit., & Sp. Ed.*: M.A., New York Univ., Ph.D., Hofstra Univ.
- Pitts, Wesley**, *Asst. Prof., Middle & H.S. Ed.*: B.A., M.A., City Coll. of New York; M.Phil., Ph.D., City Univ. of New York Grad. Center
- Porter-Morgan, Holly**, *Sr. Coll. Lab. Tech., Env., Geog., & Geol., Sci.*: B.A., Ohio State; M.A., New York Univ.; Ph.D., City Univ. of New York Grad. Center
- Prince, Penny**, *Lect., Mus.*: B.M., M.M., Manhattan School of Mus.
- Prohaska, Vincent**, *Assoc. Prof., Psych.*: B.S., Adelphi Univ.; Ph.D., Univ. of Chicago
- Qian, Gaoyin**, *Assoc. Prof., Cslg., Ldrshp., Lit., & Sp. Ed.*: B.A., East China Normal Univ.; M.A., Shanghai International Studies Univ.; M.S.Ed., Southwest Missouri Univ.; Ph.D., Univ. of Georgia
- Raam, Ryan**, *Asst. Prof. Anthro.*: B.S., Univ. of Calgary; M.A., M.Phil., Ph.D., New York Univ.
- Rachlin, Joseph W.**, *Prof., Biol. Sci.*: B.S., City Coll. of New York; M.S., Ph.D., New York Univ.
- Reid, Anne**, *Asst. Prof., Psych.*: B.S., Univ. of Toronto; M.A., Ph.D., City Univ. of New York Grad. Center
- Reisz de Rivarola, Susana**, *Prof., Langs. & Lits.*: Universidad de Buenos Aires Licenciada; Ph.D., Univ. of Heidelberg (Germany)
- Rénique, José Luis**, *Assoc. Prof., Hist.*: B.A., Universidad Católica del Perú; Ph.D., Columbia Univ.
- Renshon, Stanley A.**, *Prof., Pol. Sci.*: B.A., Rutgers Univ.; M.A., American Univ.; Ph.D., Univ. of Penn.
- Richards, John L.**, *Assoc. Prof., Chem.*: B.S., Yale Univ.; Ph.D., Univ. of Chicago
- Ricourt, Milagros**, *Assoc. Prof., Lat. Amer. & Puerto Rican Studies*: B.A., Universidad Autonoma de Santo Domingo; M.A., Univ. of Florida; Ph.D., City Univ. of New York Grad. Center
- Roberts, Laura**, *Asst. Prof., Cslg., Ldrshp., Lit., & Sp. Ed.*: B.S. Indiana Univ. of Pennsylvania; M.S., Baruch Coll.; M.S. Mercy Coll.; Ph.D., Univ. of Mich.
- Robertson, Andrew W.**, *Assoc. Prof., Hist.*: B.A., Franklin and Marshall Coll.; Ph.D., Oxford Univ.
- Rodriguez, Ada**, *Lect., Econ., Acct., & Bus. Adm.*: B.S., Lehman Coll.; M.B.A., Columbia Univ.
- Rodríguez, M. Victoria**, *Asst. Prof., Early Childh. & Childh. Ed.*: B.A., Univ. of Barcelona; M.A., City Coll. of New York; Ed.D., Teachers Coll., Columbia Univ.
- Rofrano, Frances**, *Asst. Prof., Early Childh. & Childh. Ed.*: B.S., Seton Hall Univ.; M.S. Ed., State Univ. of New York at New Paltz; Ed.D., Teachers Coll., Columbia Univ.
- Rosen, Marjorie**, *Assoc. Prof., Journalism, Com., & Theatre*: B.A., Univ. of Michigan; M.S., New York Univ.
- Rosenberg, Lynn**, *Lect., Speech-Lang.-Hearing Sci.*: B.S., M.S., Buffalo State Coll.
- Rosenthal, David M.**, *Prof., Philos.*: A.B., Univ. of Chicago; M.A., Ph.D., Princeton Univ.
- Rosholt, Rhys**, *Instr., Math. & Computer Sci.*: A.A., Miss. Gulf Coast Jr. Coll.; B.A., M.S., Lehman Coll.
- Ross, Alexandra**, *Asst. Prof., Early Childh. & Childh. Ed.*: B.A., Skidmore Coll.; M.A., M.Ed., Ed.D., Teachers Coll., Columbia Univ.
- Ross, Marshall**, *Lect., Econ., Acct., & Bus. Adm.*: B.S., Hunter Coll.; M.B.A., Long Island Univ.; C.P.A., New York State
- Rota-Donahue, Christine**, *Lect., Speech-Lang.-Hearing Sci.*: M.S., Hunter Coll.; Dual Certification, Hofstra Univ.
- Rothchild, David J.**, *Lect., Math. & Computer Sci.*: B.S., City Coll. of New York; M.A., Hunter Coll.
- Rothstein, Anne L.**, *Dir. of School/Coll. Collaboratives and Prof., Early Childh. & Childh. Ed.*: B.S., Brooklyn Coll.; M.A., Ed.D., Teachers Coll., Columbia Univ.
- Ruiz, Philip Anthony**, *Lect., Journalism, Com., & Theatre*: B.A., Fordham Univ.; Cert., Film Prod., New York Univ.; M.A., New York Univ.
- Rupp, Stephanie**, *Asst. Prof., Anthro.*: A.B., Dartmouth Coll.; M.Ed., Harvard Univ.; M.Phil., Ph.D., Yale Univ.
- Saen-de-Casas, Maria del Carmen**, *Asst. Prof., Langs. & Lits.*: B.A., Univ. Seville, Spain; M.A., Univ. of Michigan; Ph.D., City Univ. of New York Grad. Center

- Sailor, Kevin**, *Assoc. Prof., Psych.*: B.A., Univ. of Calif. at Berkeley; M.A., Ph.D., Univ. of Ill.
- Salamandra, Christa**, *Assoc. Prof., Anthro.*: B.A., M.A., New York Univ.; D. Phil., Univ. of Oxford
- Salvatore, Ralph**, *Prof., Chem.*: B.S., Iona Coll.; M.S., State Univ. of New York at Stony Brook; Ph.D., Univ. of South Florida
- Samuel, Lalitha**, *Asst. Prof., Health Sci.*: B.S., Gargi Coll.; M.S., Ph.D., G.B., Pant Univ.
- Sanford, Victoria**, *Assoc. Prof., Anthro.*: B.A., Calif. State Univ. at Sacramento; M.A., San Fran. State Univ.; A.M., Ph.D., Stanford Univ.
- Sankaran, Renuka**, *Asst. Prof., Biol. Sci.*: B.Sc., M.Sc., Univ. of Madras, India; M.S., Ph.D., Southern Ill. Univ.
- Sapadin, Rosa**, *Lect., Nurs.*: B.S., M.S., Lehman Coll.
- Saravia-Shore, Marietta**, *Assoc. Prof., Early Childh. & Childh. Ed.*: B.A., Barnard Coll.; M.A., New School for Soc. Research; M.A., Teachers Coll., Columbia Univ.; M.Phil., Ph.D., Columbia Univ.
- Schlesinger, Kenneth**, *Chief Librarian & Prof.*: B.A., Univ. of Calif. at Berkeley; M.F.A., Yale Univ., M.L.S., Pratt Inst.
- Schmidt, Tyler**, *Asst. Prof., Engl.*: B.S., Univ. of Wisc. at Madison; M.A., Teachers Coll., Columbia Univ.; Ph.D., City Univ. of New York Grad. Center
- Schneider, Robert B.**, *Prof., Math. & Computer Sci.*: B.S., Mass. Inst. of Tech.; Ph.D., Stanford Univ.
- Schroder, Barbara**, *Asst. Prof., Middle & H.S. Ed.*: M.A., New York Univ.; Ph.D., Rutgers Univ.
- Schwartz, Gary S.**, *Dir., Macaulay Honors Coll. at Lehman Coll., Lehman Scholars Prog., and Prof., Langs. & Lits.*: A.B., Columbia Coll.; B.A., M.A., Jesus Coll., Cambridge Univ.; Ph.D., Columbia Univ.
- Schwittek, David**, *Coll. Lab Tech., Art*: B.A., State Univ. of New York at New Paltz; M.F.A., Parsons School of Design
- Seiger-Gardner, Liat**, *Asst. Prof., Speech-Lang.-Hearing Sci.*: B.A., Tel-Aviv Univ.; M.A., Queens Coll.; Ph.D., City Univ. of New York Grad. Center
- Sembenu, Sekhem**, *Assoc. Prof., Econ., Acct., & Bus. Adm.*: B.A., M.A., Ph.D., Columbia Univ.
- Senreich, Evan**, *Asst. Prof., Soc. Wk.*: B.A., D.D.S., M.S.W., Ph.D., New York Univ.
- Seplowin, Charles J.**, *Assoc. Prof., Art*: B.F.A., New Hampshire Univ.; M.F.A., Rhode Island School of Design
- Sharav, Itzhak**, *Prof., Econ., Acct., & Bus. Adm.*: B.A., New School for Soc. Research; M.B.A., Baruch Coll.; Ph.D., City Univ. of New York Grad. Center; C.P.A., New York State
- Shiller, Jessica**, *Asst. Prof., Middle & H.S. Ed.*: B.A., Univ. of Rochester; M.A., Teachers Coll., Columbia Univ.; Ph.D., New York Univ.
- Shockett, Bernard**, *Prof., Mus.*: B. Mus., Manhattan School of Mus.; M.A., Brooklyn Coll.; Ph.D., New York Univ.
- Shreiber, Chanoch**, *Prof., Econ., Acct., & Bus. Adm.*: LL.B., Hebrew Univ. (Israel); LL.M., Ph.D., Columbia Univ.
- Shuwairi, Sarah**, *Asst. Prof., Psych.*: B.A., Boston Univ.; M.S.Ed., Univ. of Penn.; M.A., Columbia Univ.; Ph.D., New York Univ.
- Silverman, Helene J.**, *Prof., Early Childh. & Childh. Ed.*: B.A., M.S., Queens Coll.; Ph.D., Fordham Univ.
- Skolnik, Janet**, *Lect., Art*: B.A., Brooklyn Coll.; M.F.A., Pratt Inst.
- Sloan, Heather**, *Assoc. Prof., Env., Geog., & Geol., Sci.*: B.Sc., State Univ. of New York at Albany; M.A., Univ. of California at Santa Clara; Ph.D., Univ. of Paris 6
- Smith, Constance Joye**, *Asst. Prof., Middle and H.S. Ed.*: B.S., Univ. of N. Carolina; M.A., Ed.D., Teachers Coll., Columbia Univ.
- Smith Gabig, Cheryl**, *Asst. Prof., Speech-Lang.-Hearing Sci.*: B.S., Miami Univ.; M.S., Emerson Coll.; Ph.D., Univ. of Conn.
- Soetart, Susan**, *Coll. Lab. Tech., Journalism, Com., & Theatre*: B.S., Univ. of Kansas; M.A., New York Univ.
- Sokol, Marilyn**, *Dist. Lect., Journalism, Com., & Theatre*: B.A., New York Univ.
- Sormani, Christina**, *Asst. Prof., Math. & Computer Sci.*: B.A., New York Univ.; Ph.D., Courant Inst. of Mathematical Sci.
- Soto, Adelaide**, *Lect., Libr.*: B.A., Lehman Coll.; M.L.I.S., Palmer School of Library & Info. Sci., Long Island Univ.
- Spear, Thomas**, *Prof., Langs. & Lits.*: B.A., Lawrence Univ.; M.A., Univ. of Calif. at Santa Barbara; Ph.D., New York Univ.
- Spencer, Robyn C.**, *Asst. Prof., History*: B.A., State Univ. of New York at Binghamton; M.A., M.Phil., Ph.D., Columbia Univ.
- Stefan, Vincent H.**, *Assoc. Prof., Anthro.*: B.A., Univ. of Wyoming; M.S., Ph.D., Univ. of New Mexico
- St. John, Katherine**, *Assoc. Prof., Math. & Computer Sci.*: B.A., Smith Coll.; M.A., Johns Hopkins Univ.; Ph.D., Univ. of Calif., Los Angeles
- Stewart, Robert**, *Dist. Lect., Mus.*: B.S., Philadelphia Coll. of the Arts; M.A.T., Lehman Coll.
- Sutliff, Robert**, *Higher Ed. Assoc., Math. & Computer Sci.*: B.A., Queens Coll.; M.A., City Univ. of New York Grad. Center
- Szabo, Zoltan**, *Prof., Math. & Computer Sci.*: Ph.D., Szeged Univ. (Hungary)
- Taback, Stanley F.**, *Prof., Middle & H.S. Ed.*: A.B., A.M., Columbia Univ.; Ph.D., Teachers Coll., Columbia Univ.
- Tallier, Peggy**, *Asst. Prof., Nurs.*: B.S., Kean Coll.; M.P.A., Fairleigh Dickinson Univ.; Ed.D., Teachers Coll., Columbia Univ.
- Tananbaum, Duane**, *Assoc. Prof., Hist.*: B.A., Cornell Univ.; M.A., M.Phil., Ph.D., Columbia Univ.
- Tauber, Linda**, *Lect., Econ., Acct., & Bus. Adm.*: B.A., New York Univ.; M.B.A., Baruch Coll.; C.P.A., Texas
- Tegeder, Dannielle**, *Asst. Prof., Art*: B.F.A., State Univ. of New York at Purchase; M.F.A., Art Institute of Chicago
- Tesoro, Mary Gay**, *Lect., Nurs.*: A.A.S., Queensborough Comm. Coll.; B.A., M.S., Lehman Coll.
- Tessler, Minda**, *Lect., Psych.*: B.A., Bennington Coll.; M.Phil., Trinity Coll.; Ph.D., City Univ. of New York Grad. Center
- Thompson, Patricia J.**, *Prof., Cslg., Ldrshp., Lit., & Sp. Ed.*: A.B., Barnard Coll.; M.S., Lehman Coll.; M.A., M.Ed., Ed.D., Teachers Coll., Columbia Univ.
- Tilley, Janette**, *Asst. Prof., Mus.*: B.A., M.A., Univ. of British Columbia; Ph.D., Univ. of Toronto
- Tiryaki-Sonmez, R. Gul**, *Assoc. Prof., Health Sci.*: B.S., Gazi University (Turkey); M.S., Oklahoma State Univ.; Ph.D., Univ. of New Mexico
- Tobias, Alice**, *Assoc. Prof., Health Sci.*: B.S., Ohio State Univ.; M.S., Ed.D., Teachers Coll., Columbia Univ.
- Totti, Xavier**, *Lect., Lat. Amer. & Puerto Rican Studies*: B.A., Univ. of Puerto Rico; M.A., Hunter Coll.; M.Phil., City Univ. of New York Grad. Center
- Towery, Terry**, *Assoc. Prof., Art*: B.S., Florida State Univ.; M.F.A., Univ. of Florida
- Trimboli, Steven J., Sr.**, *Coll. Lab. Tech., Biol. Sci.*: B.A., Lehman Coll.
- Troy, Robert C.**, *Assoc. Provost and Asst. Vice Pres. for Enrollment Management; Prof., Env., Geog., Geol., Sci.*: B.S., Univ. of Hartford; Ph.D., Purdue Univ.
- Tsiamtsiouris, Jim**, *Asst. Prof., Speech-Lang.-Hearing Sci.*: B.A., Kean Univ.; M.S., Univ. of Vermont; Ph.D., City Univ. of New York Grad. Center
- Valentine, Robert T.**, *Lect., History*: B.A., The Citadel; M.A., Fordham Univ.; Ph.D., Univ. of S. Carolina
- Valgemmae, Mardi**, *Prof., Engl.*: B.A., Rutgers Univ.; Ph.D., Univ. of Calif. at Los Angeles
- Van Voorhis, Lynne**, *Lect., Langs. & Lits.*: A.B., Hunter Coll.; M.A., Middlebury Coll.; M.Phil., Columbia Univ.; J.D., Brooklyn Law School
- Velasco-Whetsell, Martha**, *Assoc. Prof., Nurs.*: B.S., M.S., Ph.D., Univ. of S. Carolina
- Villafane, Alicia**, *Lect., S.E.E.K. Advice-ment and Couns.*: A.B., Hunter Coll.; M.S.Ed., Richmond Coll.
- Voge, Susan**, *Assoc. Prof., Libr.*: B.A., Brooklyn Coll.; M.S.L.S., Columbia Univ.; M.B.A., Fordham Univ.
- Wallace, Edwin, D.**, *Higher Ed. Asst., Libr.*: A.A., Queensborough Community Coll.; B.A., Hunter Coll.; M.L.S., M.F.A., Queens Coll.
- Warde, Bryan**, *Asst. Prof., Soc. Wk.*: B.S., York Coll.; M.S.W., Columbia Univ.; Ph.D., City Univ. of New York Grad. Center

- Waring, Elin**, *Assoc. Prof., Soc.*: B.A., Swarthmore Coll.; M.A., Ph.D., Yale Univ.
- Washington, Valerie M.**, *Assoc. Prof., Early Childh. & Childh. Ed.*: A.B., M.S., Hunter Coll.; Ed.D., Univ. of Mass.
- Watson, James**, *Asst. Prof., Libr.*: B.S., State Univ. of New York at Albany; M.S., Long Island Univ.; M.P.S., New York Univ.
- Watson-Turner, Susan**, *Asst. Prof., Journalism, Com., & Theatre*: B.F.A., Ohio Univ., M.F.A., Columbia Univ.
- Weinstein, Barbara**, *Prof., Speech-Lang.-Hearing Sci.*: B.A., State Univ. of New York at Buffalo; M.Phil., Ph.D., Columbia Univ.
- West, Joyce F.**, *Assoc. Prof., Speech-Lang.-Hearing Sci.*: B.S., Central Mich. Univ.; M.A., Ohio State Univ.; Ph.D., Univ. of Mich.
- Westrem, Scott**, *Assoc. Prof., Engl.*: B.A., Wheaton Coll. (Illinois); M.A., Ph.D., Northwestern Univ.
- Whittaker, Robert T.**, *Assoc. Provost for Und. Studies and Online Ed., and Prof., Journalism, Com., & Theatre*: B.A., M.A., Ph.D., Indiana Univ.
- Wilder, Esther**, *Asst. Prof., Soc.*: B.A., Univ. of Mass. at Amherst; M.A., Ph.D., Brown Univ.
- Williams-Gray, Brenda**, *Asst. Prof., Soc. Wk.*: B.S.W., Adelphi Univ.; M.S.W., Fordham Univ.; D.S.W., City Univ. of New York Grad. Center
- Wooldridge, William**, *Asst. Prof., History*: B.A., Swarthmore Coll.; M.A., Univ. of Washington; Ph.D., Princeton Univ.
- Wunder, Amanda**, *Asst. Prof., History*: B.A., Wesleyan Univ.; M.A., Ph.D., Princeton Univ.
- Wurtzel, Eleanore**, *Prof., Biol. Sci.*: B.S., Ph.D., State Univ. of New York at Stony Brook
- Yard, Margaret**, *Asst. Prof, Nurs.*: B.S. Columbia Univ.; M.S., Long Island Univ.; M.S., Hunter Coll.; M.A., M.S., Ph.D., City Univ. of New York Grad. Center
- Yates, Suzanne**, *Assoc. Prof., Psych.*: B.A., State Univ. of New York at New Paltz; M.A., Ph.D., Univ. of Calif. at Santa Cruz
- Yood, Jessica**, *Assoc., Prof. Engl.*: B.A., Barnard Coll., Columbia Univ.; Ph.D., State Univ. of New York at Stony Brook
- Zakin, Andrea**, *Inst., Early Childh. & Childh. Ed.*: B.A., Earlham Coll.; M.A., Hunter Coll.
- Zarin, Eve**, *Lect., Engl.*: A.B., Swarthmore Coll.; A.M., Columbia Univ.
- Zheng, Zhi-Liang**, *Assoc. Prof., Biol. Sci.*: Ph.D., Ohio State Univ.; Postdoc., Univ. of Calif. at Riverside
- Zuss, Mark**, *Assoc. Prof., Cslg., Ldrshp., Lit., & Sp. Ed.*: B.A., Empire State Coll., State Univ. of New York; M.A., Ph.D., City Univ. of New York Grad. Center
- EMERITI**
- Allman, Eileen**, *Assoc. Prof. Emer., Engl.*: A.B., Hunter Coll.; M.A., Ph.D., Syracuse Univ.
- Backer, Barbara**, *Prof. Emer., Nurs.*: B.S., Keuka Coll.; M.S., Univ. of Rochester; M.A., New York Univ.; D.S.W., City Univ. of New York Grad. Center
- Bady, David M.**, *Assoc. Prof. Emer., Engl.*: A.B., Columbia Coll.; A.M., Ph.D., Columbia Univ.
- Bank, Stanley**, *Prof. Emer., Secondary, Adult, and Business Ed.*: A.B., Clark Univ.; M.A., Ph.D., Columbia Univ.
- Basile, Dominick V.**, *Prof., Emer., Biol. Sci.*: B.S., Manhattan Coll.; M.A., Ph.D., Columbia Univ.
- Bastos, María L.**, *Prof. Emer., Rom. Lang.*: B.A., Escuela Normal, Buenos Aires; M.A., Univ. of Buenos Aires; Ph.D., Univ. of La Plata, Argentina.
- Baumgarten, Reuben L.**, *Prof. Emer., Chem.*: B.S., City Coll. of New York; M.S., Ph.D., Univ. of Michigan.
- Beaton, Sarah**, *Assoc. Prof. Emer., Nurs.*: B.S., Fairleigh Dickinson Univ.; M.A., Ph.D., New York Univ.
- Bergman, Edward F.**, *Prof. Emer., Geol. & Geog.*: B.A., Univ. of Wisconsin; M.A., Ph.D., Univ. of Washington.
- Bermel, Albert**, *Prof. Emer., Speech & Theatre*: B.Sc., London Schl. of Econ.
- Beye, Charles R.**, *Dist. Prof. Emer., Langs. and Lits.*: B.A., State Univ. of Iowa; M.A., Ph.D., Harvard Univ.
- Bitton-Jackson, Livia E.**, *Prof. Emer., Class., Orient., Germ., & Slav. Lang.*: B.A., Brooklyn Coll.; M.A., Ph.D., New York Univ.
- Blecher, George**, *Assoc. Prof. Emer., Engl.*: A.B., Harvard Univ.
- Boissevain, Ethel W.**, *Assoc. Prof. Emer., Anthro.*: A.B., Vassar Coll.; Ph.D., Univ. of Prague
- Borodkin, Thelma**, *Assoc. Prof. Emer., Acad. Skills/S.E.E.K.*: B.A., Brooklyn Coll.; M.A., New York Univ.; Ph.D., Union Grad. Schl.
- Bradley, A. Day**, *Prof. Emer., Math. & Computer Sci.*: A.B., Penn. State Univ.; A.M., Teachers Coll., Columbia Univ.; Ph.D., Columbia Univ.
- Bronstein, Arthur J.**, *Prof. Emer., Speech & Theatre*: B.A., City Coll. of New York; M.A., Columbia Univ.; Ph.D., New York Univ.
- Bronzaft, Arline L.**, *Prof. Emer., Psych.*: A.B., Hunter Coll.; M.A., Ph.D., Columbia Univ.
- Bruni, James V.**, *Prof. Emer., Early Childh. & Childh. Ed.*: A.B., Columbia Coll.; M.A., Ed.D., Teachers Coll., Columbia Univ.
- Bucchioni, Eugene**, *Prof. Emer., Early Childh. & Elem. Ed.*: B.A., M.A., Queens Coll.; Ph.D., New School for Soc. Research
- Bush, Robert B.**, *Prof. Emer., Engl.*: A.B., Princeton Univ.; M.A., Columbia Univ.; Ph.D., Univ. of Iowa
- Carnicelli, Domenick D.**, *Prof. Emer., Engl.*: B.A., Brooklyn Coll.; M.A., Ph.D., Columbia Univ.
- Cavalchini, Mariella**, *Assoc. Prof. Emer., Rom. Lang.*: Laurea di Dottore in Materie Letterarie, Univ. of Rome; Ph.D., New York Univ.
- Costinescu, Gheorghe**, *Prof. Emer., Mus.*: M.S., Bucharest Mus. Conservatory; Post Grad. Diploma, Juilliard School of Music; Ph.D., Columbia Univ.
- Dayan, Jean**, *Prof. Emer., Chem.*: B.A., Brooklyn Coll.; M.S., Ohio State Univ.; Ph.D., Columbia Univ.
- DiBennardo, Robert**, *Prof. Emer., Anthro.*: A.B., M.A., Hunter Coll.; Ph.D., City Univ. of New York Grad. Center
- Dickman, Ronald**, *Prof. Emer., Phys. & Astron.*: B.A., Hunter Coll.; Ph.D., Univ. of Texas
- DiGennaro, Joseph**, *Prof. Emer., ExSL*: A.B., Hunter Coll.; M.S., Univ. of Illinois; Ed.D., Teachers Coll., Columbia Univ.
- Donleavy, Mary Rita**, *Prof. Emer., Sp. Serv. In Ed.*: A.B., A.M., Hunter Coll.; Ph.D., Fordham Univ.
- Donnelly, Margaret E.**, *Assoc. Prof. Emer., Soc. & Soc. Wk.*: B.A., Russell Sage Coll.; M.A., Ph.D., Fordham Univ.
- Downs, Frederick**, *Prof. Emer., Chem.*: A.B., Hunter Coll.; M.S., Ph.D., New York Med. Coll.
- Duberman, Martin B.**, *Dist. Prof. Emer., Hist.*: B.A., Yale Univ.; M.A., Ph.D., Harvard Univ.
- Dubler, Walter**, *Assoc. Prof. Emer., Engl.*: B.A., Yeshiva Univ.; M.A., Tulane Univ.; Ph.D., Harvard Univ.
- Ebel, Harvey C.**, *Assoc. Prof. Emer., ExSL*: B.A., City Coll. of New York; M.S., Ph.D., Penn. State Univ.
- Edel, Wilbur**, *Prof. Emer., Pol. Sci.*: B.S., New York Univ.; A.M., Ph.D., Columbia Univ.
- Elftman, Alice G.**, *Prof. Emer., Biol. Sci.*: A.B., New York State Coll. for Teachers; A.M., Ph.D., Cornell Univ.
- Engelke, Charles E.**, *Assoc. Prof. Emer. Phys., & Astron.*: B.S., Queens Coll.; M.A., Ph.D., Columbia Univ.
- Fleischer, Michael M.**, *Prof. Emer., ExSL*: B.S., City Coll. of New York; M.A., Ed.D., Teachers Coll., Columbia Univ.
- Fletcher, Angus**, *Dist. Prof. Emer., Engl.*: B.A., Yale Univ.; Dipl. d'Etudes, Univ. of Grenoble (France); M.A., Yale Univ.; Ph.D., Harvard Univ.
- Flint, Shirley H.**, *Assoc. Prof. Emer., Early Childh. & Elem. Ed.*: B.A., New York Univ.; M.A., Hunter Coll.; Ed.D., Teachers Coll., Columbia Univ.
- Frankel, Edward**, *Prof. Emer., Early Childh. & Elem. Ed.*: B.S., City Coll. of New York; M.A., Columbia Univ.; Ph.D., Yeshiva Univ.
- Freedman, Philip I.**, *Prof. Emer., Secondary, Adult, and Bus. Ed.*: B.S.S., City Coll. of New York; M.A., Ph.D., Columbia Univ.
- Fuchs, Morton**, *Assoc. Prof. Emer., Phys. & Astron.*: B.S.E.E., City Coll. of New York; Ph.D., Univ. of Mich.

- Gavurin, Edward I.**, *Prof. Emer., Psychol.*: B.A., Brooklyn Coll.; M.A., Ph.D., New York Univ.
- Geehern, Margaret K.**, *Assoc. Prof. Emer., Phys. & Astron.*: B.S., M.S., Ph.D., Fordham Univ.
- Gillespie, John R.**, *Prof. Emer., Phys. & Astron.*: B.S., Univ. of Rochester; Ph.D., Univ. of Calif. at Berkeley
- Goldfarb, Robert**, *Prof. Emer., Speech-Lang.-Hearing Sci.*: B.A., M.S., Brooklyn Coll.; Ph.D., City Univ. of New York Grad. Center
- Goodwin, M. Beatrice**, *Prof. Emer., Nurs.*: B.S.N., Vanderbilt Univ.; M.A., Ph.D., New York Univ.
- Gottesfeld, Harry**, *Prof. Emer., Psychol.*: B.A., Brooklyn Coll.; Ph.D., New York Univ.
- Gottsegen, Gloria Behar**, *Prof. Emer., Sp. Serv. in Ed.*: B.A., New York Univ.; M.A., City Coll. of New York; Ph.D., New York Univ.
- Griffin, Alice**, *Prof. Emer., Engl.*: A.B., George Wash. Univ.; A.M., Ph.D., Columbia Univ.
- Guelich, Ernestine D.**, *Assoc. Prof. Emer., Engl.*: A.B., Hunter College; A.M., Columbia Univ.; Ph.D., Fordham Univ.
- Guthwin, Hyman**, *Assoc. Prof. Emer., Biol. Sci.*: B.A., M.S., Ph.D., New York Univ.
- Haas, Ann Pollinger**, *Prof. Emer., Health Serv.*: B.A., Wheeling Coll.; M.A., Ph.D., Fordham Univ.
- Haboucha, Reginetta**, *Prof. Emer., Rom. Lang.*: B.A., Queens Coll.; M.A., Ph.D., Johns Hopkins Univ.
- Hammond, Dorothy**, *Assoc. Prof. Emer., Biol. Sci.*: A.B., Wellesley Coll.; A.M., Ph.D., Columbia Univ.
- Hannes, Martin**, *Assoc. Prof. Emer., Psych.*: B.S., City Coll. of New York; M.A., Ph.D., Columbia Univ.
- Harris, Gilbert J.**, *Assoc. Prof. Emer., Psychol.*: B.S., City Coll. of New York; Ph.D., State Univ. of New York at Buffalo
- Hausknecht, Murray**, *Prof. Emer., Soc. & Soc. Wk.*: B.S.S., City Coll.; M.A., Ph.D., Columbia Univ.
- Hayden, Seymour**, *Prof. Emer., Math. & Computer Sci.*: B.A., Univ. of Wisconsin; M.A., Ph.D., Harvard Univ.
- Herdt, Beryl**, *Prof. Emer., ExSL*: A.B., M.S., Hunter Coll.; Ph.D., St. John's Univ.
- Hoffmann, Ursula F.**, *Assoc. Prof. Emer., Langs. & Lits.*: A.B., Smith Coll.; M.A., Ph.D., Yale Univ.
- Isaac, Richard E.**, *Prof. Emer., Math. & Computer Sci.*: B.A., Cornell Univ.; Ph.D., Univ. of Calif. at Berkeley
- Isaacs, Godfrey**, *Prof. Emer., Math & Computer Sci.*: B.S., M.S., Univ. of Capetown; Ph.D., Univ. of London
- Jackson, Joseph L.**, *Assoc. Prof. Emer., Acad. Skills/S.E.E.K.*: B.S., N. Carolina Agric. & Tech. Univ.; M.S.W., Adelphi Univ.; Ed.D., Univ. of Mass.
- James, Alice G.**, *Assoc. Prof. Emer., Anthro.*: A.B., Hunter Coll.; M.A., Ph.D., Columbia Univ.
- Johnston, Helen**, *Assoc. Prof. Emer., Chem.*: B.S., Howard Coll.; Ph.D., Columbia Univ.
- Jones, C. Robert**, *Prof. Emer., Biol. Sci.*: B.S., Univ. of Scranton; M.S., Ph.D., Fordham Univ.
- Judd, Jacob**, *Prof. Emer., Hist.*: A.B., M.A., Ph.D., New York Univ.
- Kravitt, Edward F.**, *Prof. Emer., Mus.*: A.B., A.M., Ph.D., New York Univ.
- Kane, Margaret O'Shea**, *Prof. Emer., Bus. Ed.*: A.B., Hunter Coll.; A.M., Ed.D., New York Univ.
- Kearns, Francis E.**, *Prof. Emer., Engl.*: A.B., New York Univ.; M.A., Univ. of Chicago; Ph.D., Univ. of N. Carolina
- Kiesler, Rose**, *Assoc. Prof. Emer., Geol. & Geog.*: B.A., Hunter Coll.; M.A., Columbia Univ.
- Kligerman, Jack M.**, *Prof. Emer., Engl.*: B.A., M.A., Syracuse Univ.; Ph.D., Univ. of Calif. at Berkeley
- Knehr, Charles A.**, *Prof. Emer., Psych.*: A.B., A.M., Ph.D., Columbia Univ.
- Kravetz, Nathan**, *Prof. Emer., Early Childh. & Elem. Ed.*: B.Ed., M.A., Ed.D., Univ. of Calif. at Los Angeles
- Lagos, Maria**, *Assoc. Prof. Emer., Anthro.*: B.A., M.A., M.Phil., Ph.D., Columbia Univ.
- Lahey, Miriam P.**, *Assoc. Prof. Emer., Health Serv.*: B.A., Mt. St. Vincent Univ., Halifax; Ed.M., Ed.D. Teachers Coll., Columbia Univ.
- Lampen, Dorothy**, *Prof. Emer., Econ., Acct., & Bus. Adm.*: A.B., Carleton Coll.; Ph.D., Johns Hopkins Univ.
- Lebowitz, Aaron**, *Assoc. Prof. Emer., Math. & Computer Sci.*: A.B., A.M., Ph.D., Yeshiva Univ.
- Lehmann, Margaret Grennan**, *Prof. Emer., Engl.*: A.B., Hunter Coll.; A.M., Ph.D., Columbia Univ.
- Levi, Howard**, *Prof. Emer., Math. & Computer Sci.*: B.A., Ph.D., Columbia Univ.
- Losada, Luis A.**, *Prof. Emer., Langs. and Lits.*: A.B., Hunter Coll.; M.A., Ph.D., Columbia Univ.
- Lundberg, Robert**, *Prof. Emer., Second., Adult, and Bus. Ed.*: B.Ed., Wisc. State Coll.; M.A., Ed.D., Teachers Coll., Columbia Univ.
- McKenna, Anna Brohmer**, *Prof. Emer., Art*: A.B., Hunter Coll.; A.M., Columbia Univ.
- McLaughlin, Andrew C.**, *Prof. Emer., Philos.*: B.A., Union Coll.; Ph.D., State Univ. of New York at Buffalo
- Mencher, Joan P.**, *Prof. Emer., Anthro.*: B.A., Smith Coll.; Ph.D., Columbia Univ.
- Messing, Janet K.**, *Prof. Emer., Econ., Acct., & Bus. Adm.*: A.B., Hunter Coll.; M.S., Columbia Univ.; Ph.D., New York Univ.; C.P.A., New York State
- Meyer, Paul R.**, *Prof. Emer., Math. & Computer Sci.*: B.A., Dartmouth Coll.; M.S., Thayer School of Engr.; M.A., Ph.D., Columbia Univ.
- Meyer, Ursula**, *Prof. Emer., Art*: B.A., New School for Soc. Research; M.A., Columbia Univ.
- Meyersohn, Rolf B.**, *Prof. Emer., Soc. & Soc. Wk.*: B.A., Harvard Coll.; M.A., Ph.D., Columbia Univ.
- Minter, Thomas K.**, *Prof. Emer., Second., Adult, & Bus. Ed.*: B.S., M.A., New York Univ.; S.M.M., Union Theol. Sem.; Ed.D., Harvard Univ.
- Moffitt, Brenda P.**, *Assoc. Prof., Biol. Sci.*: B.Sc., Bedford Coll. (U.K.); M.Sc., Univ. Coll., Univ. of London; Ph.D., Columbia Univ.
- Morgan, Kathleen E.**, *Prof. Emer., Langs. & Lits.*: B.A., Stanford Univ.; M.A., M.Phil., Ph.D., Yale Univ.
- Morgan-Cato, Charlotte T.**, *Assoc. Prof. Emer., Black Studies*: B.A., Univ. of Chicago; M.I.A., Columbia Univ.; M.Ed., Ed.D., Teachers Coll., Columbia Univ.
- Movesian, George**, *Prof. Emer., Early Childh. & Elem. Ed.*: B.A., Univ. of Buffalo; M.S., Ed.D., State Univ. of New York at Buffalo
- Murgatroyd, Dorothy**, *Assoc. Prof. Emer., Psych.*: B.A., Barnard Coll.; M.A., Ph.D., Univ. of Penn.
- Murphy, Daniel B.**, *Prof. Emer., Chem.*: B.S., M.S., Fordham Univ.; Ph.D., Penn. State Univ.
- Newman, Charlotte**, *Assoc. Prof. Emer., Biol. Sci.*: A.B., A.M., Univ. of Mich.; A.M., Ph.D., Radcliffe Coll.
- Norris, Nilan**, *Prof. Emer., Econ., Acct., & Bus. Adm.*: A.B., A.M., Ph.D., Stanford Univ.
- Patti, Anthony V.**, *Prof. Emer., Second., Adult, and Bus. Ed.*: B.S., M.A., New York Univ.; Ed.D., Teachers Coll., Columbia Univ.
- Phillips, Esther R.**, *Prof. Emer., Math. & Computer Science*: B.S., Brooklyn Coll.; M.A., Ph.D., New York Univ.
- Proskauer, Paul**, *Assoc. Prof. Emer., Class., Orient., Germ. & Slav. Lang.*: B.B.A., City Coll. of New York; M.A., Hunter Coll.; Ph.D., Columbia Univ.
- Raphael, Lawrence J.**, *Prof. Emer., Speech & Theatre*: B.A., M.A., Queens Coll.; Ph.D., City Univ. of New York Grad. Center
- Reed, Victor**, *Assoc. Prof. Emer., Engl.*: A.B., M.A., Harvard Univ.; Ph.D., Columbia Univ.
- Ritter, Walter P.**, *Prof. Emer., Psychol.*: B.A., City Coll. of New York; Ph.D., Teachers Coll., Columbia Univ.
- Roberts, Edgar V., Jr.**, *Prof. Emer., Engl.*: B.A., M.A., Ph.D., Univ. of Minn.
- Robinson, Chester H.**, *Prof. Emer., Spec., Serv., Ed.*: B.A., Union Coll.; Ph.D., Stamford Univ.

- Romano, Salvatore**, *Prof. Emer., Art*
- Rose, Israel H.**, *Prof. Emer., Math. & Computer Sci.:* B.A., M.A., Brooklyn Coll.; Ph.D., Harvard Univ.
- Rowley-Rotunno, Virginia**, *Prof. Emer., Second., Adult, and Bus. Ed.:* A.B., Hunter Coll.; M.A., Fordham Univ.; Ph.D., Columbia Univ.
- Schoengood, George J.**, *Prof. Emer., Second., Adult, and Bus. Ed.:* A.B., Brooklyn Coll.; M.P.A., Ed.D., New York Univ.
- Seeman, Howard**, *Prof. Emer., Middle & H.S. Ed.:* B.A., Albany State Teachers Coll.; M.A., Ph.D., New School for Soc. Research
- Seraile, William**, *Prof. Emer., Afr. and Afr. Am. Studies:* B.A., Central Washington State Univ.; M.A., Teachers Coll., Columbia Univ.; Ph.D., City Univ. of New York Grad. Center
- Shaw, Frederick C.**, *Prof. Emer., Geol. & Geog.:* A.B., Harvard Coll.; M.S., Univ. of Cincinnati; Ph.D., Harvard Univ.
- Shechter, Yaakov**, *Prof. Emer., Biol. Sci.:* B.Sc., Ph.D., Univ. of Calif. at Los Angeles
- Sicherman, Carol**, *Prof. Emer., Engl.:* B.A., Barnard Coll.; B.Litt., Oxford Univ.; M.A., Ph.D., Univ. of Wisc.
- Smullyan, Raymond M.**, *Prof. Emer., Math. & Computer Sci.:* M.S., Univ. of Chicago; Ph.D., Princeton Univ.
- Spielholtz, Gerald I.**, *Prof. Emer., Chem.:* B.S., City Coll. of New York; M.S., Univ. of Michigan; Ph.D., Iowa State Univ.
- Stolnitz, M. Jerome**, *Prof. Emer., Philos.:* B.S.S., City Coll. of New York; Ph.D., Harvard Univ.
- Stuart, Irving R.**, *Prof. Emer., Psych.:* B.S.S., M.S.Ed., City Coll. of New York; Ph.D., New York Univ.
- Stuart, Meriwether**, *Prof. Emer., Class., Orient., Germ., & Slav. Lang.:* A.B., William Jewell Coll.; A.M., Indiana Univ.; Ph.D., Columbia Univ.
- Swartz, Karyl B.**, *Prof. Emer., Psych.:* B.A., Coll. of Wooster; M.A., George Peabody Coll.; Ph.D., Brown Univ.
- Taylor, James V.**, *Prof. Emer., Anthro.:* B.S., Ph.D., Columbia Univ.
- Taus, Esther R.**, *Prof. Emer., Econ., Acct., & Bus. Adm.:* A.B., Hunter Coll.; A.M., Ph.D., Columbia Univ.
- Teitelbaum, Blanche R.**, *Assoc. Prof. Emer., ExSL:* A.B., Hunter Coll.; M.S., City Coll. of New York
- Toralballa, Gloria C.**, *Prof. Emer., Chem.:* B.S., M.S., Univ. of Philippines; Ph.D., Univ. of Mich.
- Tuller, Annita**, *Prof. Emer., Math. & Computer Sci.:* A.B., Hunter Coll.; A.M., Ph.D., Bryn Mawr Coll.
- Tusiani, Joseph**, *Prof. Emer., Rom. Lang.:* Dottore in Lettere, Univ. of Naples; Litt. D., Coll. of Mt. St. Vincent
- Ullman, Jack D.**, *Prof. Emer., Phys. & Astron.:* B.S., M.S., Ph.D., Univ. of Ill.
- Valdovinos, Jack G.**, *Prof. Emer., Biol. Sci.:* B.S., M.S., Winona State Coll.; Ph.D., Univ. of Iowa
- Walker, Ruth A.**, *Prof. Emer., Chem.:* B.A., Vassar Coll.; Ph.D., Yale Univ.
- Webster, Sara**, *Prof. Emer., Art:* B.A., Barnard Coll.; M.A., Univ. of Cincinnati; Ph.D., City Univ. of New York Grad. Center
- Weiss, John**, *Prof. Emer., History:* B.A., Wayne State Univ.; M.A., Ph.D., Columbia Univ.; Ph.D., Yale Univ.
- Wells, Carl F.**, *Prof. Emer., Psychol.:* B.S.S., City Coll. of New York; M.A., Columbia Univ.; Ph.D., New York Univ.
- Wille, Rosanne**, *Prof. Emer., Nurs.:* B.S., B.S.N., William Patterson Coll.; M.P.A., Rutgers Univ.; M.A., Ph.D., New York Univ.
- Woodcock, Wilson W.**, *Assoc. Prof. Emer., Phys. & Astron.:* A.B., Sc.M., Vanderbilt Univ.
- Young, Frederick F.**, *Assoc. Prof. Emer., Geol. & Geog.:* A.B., Amherst Coll.; A.M., Ph.D., Columbia Univ.
- Zerner, Ruth**, *Assoc. Prof. Emer., Hist.:* A.B., Hunter Coll.; M.A., Stanford Univ.; Ph.D., Univ. of Calif. at Berkeley.
- Ziemann, Richard C.**, *Prof. Emer., Art:* B.F.A., M.F.A., Yale Univ.
- Zulueta, Carmen de**, *Prof. Emer., Rom. Lang.:* M.A., Radcliffe Coll.; Ph.D., New York Univ.

Appendix

Board of Trustees Rules and Regulations on Campus Conduct

RULES AND REGULATIONS FOR THE MAINTENANCE OF PUBLIC ORDER PURSUANT TO ARTICLE 129-A OF THE EDUCATION LAW

The tradition of the University as a sanctuary of academic freedom and center of informed discussion is an honored one, to be guarded vigilantly. The basic significance of that sanctuary lies in the protection of intellectual freedoms: the rights of professors to teach, of scholars to engage in the advancement of knowledge, of students to learn and express their views, free from external pressures or interference. These freedoms can flourish only in an atmosphere of mutual respect, civility, and trust among teachers and students, only when members of the University community are willing to accept self-restraint and reciprocity as the condition upon which they share in its intellectual autonomy.

Academic freedom and the sanctuary of the University campus extend to all who share these aims and responsibilities. They cannot be invoked by those who would subordinate intellectual freedom to political ends, or who violate the norms of conduct established to protect that freedom. Against such offenders the University has the right, and indeed the obligation, to defend itself. We accordingly announce the following rules and regulations to be in effect at each of our colleges which are to be administered in accordance with the requirements of due process as provided in the *Bylaws* of the Board of Higher Education.

With respect to enforcement of these rules and regulations we note that the *Bylaws* of the Board of Trustees provide that:

"The president, with respect to his education unit, shall:

Have the affirmative responsibility of conserving and enhancing the educational standards of the college and schools under his jurisdiction; Be the advisor and executive agent of the Board and of his respective College Committee and as such shall have the immediate supervision with full discretionary power in carrying into effect the *Bylaws*, resolutions, and policies of the Board, the lawful resolutions of the several faculties;

Exercise general superintendence over the concerns, officers, employees, and students of his educational unit."

I. RULES

1. A member of the academic community shall not intentionally obstruct and/or forcibly prevent others from the exercise of their rights. Nor shall he interfere with the institution's educational processes or facilities, or the rights of those who wish to avail themselves of any of the institution's instructional, personal, administrative, recreational, and community services.
2. Individuals are liable for failure to comply with lawful directions issued by representatives of the University/college when they are acting in their official capacities. Members of the academic community are

required to show their identification cards when requested to do so by an official of the college.

3. Unauthorized occupancy of University/college facilities or blocking access to or from such areas is prohibited. Permission from appropriate college authorities must be obtained for removal, relocation, and use of University/college equipment and/or supplies.
4. Theft from or damage to University/college premises or property, or theft of or damage to property of any person on University/college premises is prohibited.
5. Each member of the academic community or an invited guest has the right to advocate his position without having to fear abuse, physical, verbal, or otherwise from others supporting conflicting points of view. Members of the academic community and other persons on the college grounds shall not use language or take actions reasonably likely to provoke or encourage physical violence by demonstrators, those demonstrated against, or spectators.
6. Action may be taken against any and all persons who have no legitimate reason for their presence on any campus within the University/college, or whose presence on any such campus obstructs and/or forcibly prevents others from the exercise of their rights or interferes with the institution's educational processes or facilities, or the rights of those who wish to avail themselves of any of the institution's instructional, personal, administrative, recreational, and community services.
7. Disorderly or indecent conduct on University/college-owned or controlled property is prohibited.
8. No individual shall have in his possession a rifle, shotgun, or firearm or knowingly have in his possession any other dangerous instrument or material that can be used to inflict bodily harm on an individual or damage upon a building or the grounds of the University/college without the written authorization of such educational institution. Nor shall any individual have in his possession any other instrument or material which can be used and is intended to inflict bodily harm on an individual or damage upon a building or the grounds of the University/college.
9. Any action or situation which recklessly or intentionally endangers mental or physical health or involves the forced consumption of liquor or drugs for the purpose of initiation into or affiliation with any organization is prohibited.
10. The unlawful manufacture, distribution, dispensation, possession, or use of illegal drugs or other controlled substances by University students or employees in the workplace is prohibited. Employees of the University must also notify the College Personnel Director of any criminal drug statute conviction for a violation occurring in the workplace not later than five (5) days after such conviction.
11. The unlawful possession, use, or distribution of alcohol by students or employees on University/college premises or as part of any University/college activities is prohibited.

II. PENALTIES

1. Any student engaging in any manner of conduct prohibited under substantive Rules 1 to 11 shall be subject to the following range of sanctions as hereafter defined: admonition, warning, censure, disciplinary probation, restitution, suspension, expulsion, ejection, and/or arrest by the civil authorities.
2. Any tenured or non-tenured faculty member, or other member of the instructional staff, or member of the classified staff engaging in any manner in conduct prohibited under substantive Rules 1 to 11 shall be subject to the following range of penalties: warning, censure, restitution, fine not exceeding those permitted by law or by the *Bylaws* of the City University of New York, or suspension with/without pay pending a hearing before an appropriate College authority, dismissal after a hearing, ejection, and/or arrest by the civil authorities, and, for engaging in any manner in conduct prohibited under substantive rule 10, may, in the alternative, be required to participate satisfactorily in an appropriately licensed drug treatment or rehabilitation program. A tenured or non-tenured faculty member, or other member of the instructional staff, or member of the classified staff engaging in any manner in conduct prohibited under substantive Rules 1 to 11, shall be entitled to be treated in accordance with applicable provisions of the Education Law, or the Civil Service Law, or the applicable collective bargaining agreement, or the *Bylaws* or written policies of the City University of New York.
3. Any visitor, licensee, or invitee engaging in any manner in conduct prohibited under substantive Rules 1 to 11 shall be subject to ejection, and/or arrest by the civil authorities.
4. Any organization which authorizes the conduct prohibited under substantive rules 1-11 shall have its permission to operate on campus rescinded.
Penalties 1-4 shall be in addition to any other penalty provided by law or the City University Trustees.

SANCTIONS DEFINED:

- a. Admonition. An oral statement to the offender that he has violated University rules.
- b. Warning. Notice to the offender, orally or in writing, that continuation or repetition of the wrongful conduct, within a period of time stated in the warning, may be cause for more severe disciplinary action.
- c. Censure. Written reprimand for violation of specified regulation, including the possibility of more severe disciplinary sanction in the event of conviction for the violation of any University regulation within a period stated in the letter of reprimand.
- d. Disciplinary Probation. Exclusion from participation in privileges or extracurricular University activities as set forth in the notice of disciplinary probation for a specified period of time.
- e. Restitution. Reimbursement for damage to or misappropriation of property. Reimbursement may take the form of appropriate service to repair or otherwise compensate for damages.
- f. Suspension. Exclusion from classes and other privileges or activities as set forth in the notice of suspension for a definite period of time.

- g. Expulsion. Termination of student status for an indefinite period. The conditions of readmission, if any is permitted, shall be stated in the order of expulsion.
- h. Complaint to Civil Authorities.
- i. Ejection.
Bylaw Section 15.6

SUSPENSION OR DISMISSAL

The Board of Trustees reserves full power to dismiss or suspend a student, or suspend a student organization for conduct which impedes, obstructs, or interferes with the orderly and continuous administration and operation of any college, school, or unit of the university in the use of its facilities or in the achievement of its purposes as an educational institution.

The Chancellor or Chancellor's designee, a president or any dean may in emergency or extraordinary circumstances, temporarily suspend a student, or temporarily suspend the privileges of a student organization or group for cause, pending an early hearing as provided in bylaw section 15.3 to take place within not more than seven (7) school days. Prior to the commencement of a temporary suspension of a student, the College shall give such student oral or written notice of the charges against him/her and, if he/she denies them, the College shall forthwith give such student an informal oral explanation of the evidence supporting the charges and the student may present informally his/her explanation or theory of the matter. When a student's presence poses a continuing danger to person or property or an ongoing threat of disrupting the academic process, notice and opportunity for denial and explanation may follow suspension, but shall be given as soon as feasible thereafter.

STATEMENT OF NONDISCRIMINATION

Statement of Principles

The City University of New York, located in a historically diverse municipality, is committed to engendering values and implementing policies that will enhance respect for individuals and their cultures. The University believes that, in order truly to benefit from this diversity, the University must foster tolerance, sensitivity, and mutual respect among all members of its community. Efforts to promote diversity and to combat bigotry are an inextricable part of the educational mission of the University. Diversity among the University's many members strengthens the institution, promotes the exchange of new ideas, and enriches campus life.

The University does not condone and will not tolerate discrimination in employment or in its educational programs and activities.

The City University of New York continues to recognize the important need to maintain at each campus equal access and opportunity for qualified students, faculty, and staff from all ethnic and racial groups and from both sexes.

Policy Statement

It is the policy of The City University of New York and the constituent colleges and units of the University to recruit, employ, retain, promote, and provide benefits to employees and to admit and provide services for students without regard to race, color, national or ethnic origin, religion, age, sex, sexual orientation, gender identity, marital status, disability, genetic predisposition or carrier status, alienage, citizenship, military or veteran status, or status as a victim of domestic violence.

Sexual harassment, a form of sex discrimination, is prohibited under the University's Policy Against Sexual Harassment.

The City University of New York, as a public university system, adheres to Federal, State and city laws and regulations regarding non-discrimination and affirmative action, including among others, Executive Order 11246, as amended, Titles VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Section 402 of the Vietnam Era Veterans Readjustment Assistance Act of 1974, as amended, the Equal Pay Act of 1963, the Age Discrimination in Employment Act of 1967, as amended, and the Age Discrimination Act of 1975, the New York State Human Rights Law, and the New York City Human Rights Law. The "protected classes" as delineated in Executive Order 11246 (Black, Hispanic, Asian/Pacific Islander, American Indian/Alaskan Native, and Women) were expanded on December 9, 1976 by the Chancellor of the City University of New York to include Italian-Americans.

Responsibility for Compliance

The President of each constituent college of the University, the Senior Vice Chancellor at the Central Office, and the Dean of the Law School shall have ultimate responsibility for overseeing compliance with this Policy at his or her respective unit of the University.

Discrimination Complaints

The City University of New York is committed to addressing discrimination complaints promptly, consistently, and fairly. There shall be an employment discrimination complaint procedure administered by each unit of the University.

A job applicant, employee, or former employee of Lehman College who wishes to make a complaint related to equal employment opportunity or affirmative action should consult with Dawn Ewing Morgan, the Director of Compliance and Diversity. Mrs. Morgan can be reached at 718-960-8111. Her office is in Shuster Hall, Room 352.

Students who believe they have been discriminated against in violation of this policy should bring their complaints to the Chief Student Affairs Officer for investigation by the officer or his or her designee in accordance with this policy.

Retaliation against any member of the University community who has made a complaint of discrimination is prohibited.

THE CITY UNIVERSITY OF NEW YORK POLICY ON SEXUAL HARASSMENT

Policy Statement

It is the policy of The City University of New York to promote a cooperative work and academic environment in which there exists mutual respect for all University students, faculty, and staff. Harassment of employees or students based upon sex is inconsistent with this objective and contrary to the University's non-discrimination policy. Sexual harassment is illegal under Federal, State, and City laws, and will not be tolerated within the University.

The University, through its colleges, will disseminate this policy and take other steps to educate the University community about sexual harassment. The University will establish procedures to ensure that investigations of allegations of sexual harassment are conducted in a manner that is prompt, fair, thorough, and as confidential as possible under the circumstances, and that appropriate corrective and/

or disciplinary action is taken as warranted by the circumstances when sexual harassment is determined to have occurred. Members of the University community who believe themselves to be aggrieved under this policy are strongly encouraged to report the allegations of sexual harassment as promptly as possible. Delay in making a complaint of sexual harassment may make it more difficult for the College to investigate the allegations.

A. Prohibited Conduct

It is a violation of University policy for any member of the University community to engage in sexual harassment or to retaliate against any member of the University community for raising an allegation of sexual harassment, for filing a complaint alleging sexual harassment, or for participating in any proceeding to determine if sexual harassment has occurred.

B. Definition of Sexual Harassment

For purposes of this policy, sexual harassment is defined as unwelcome sexual advances, requests for sexual favors, and other oral or written communications or physical conduct of a sexual nature when:

1. submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or academic standing;
2. submission to or rejection of such conduct by an individual is used as a basis for employment or academic decisions affecting such individual; or
3. such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile or abusive work or academic environment.

Sexual harassment can occur between individuals of different sexes or of the same sex. Although sexual harassment most often exploits a relationship between individuals of unequal power (such as between a faculty member and student supervisor and employee, or tenured and untenured faculty members), it may also occur between individuals of equal power (such as between fellow students or coworkers), or in some circumstances even where it appears that the harasser has less power than the individual harassed (for example, a student sexually harassing a faculty member). A lack of intent to harass may be relevant to, but will not be determinative of, whether sexual harassment has occurred.

C. Examples of Sexual Harassment

Sexual harassment may take different forms. Using a person's response to a request for sexual favors as a basis for an academic or employment decision is one form of sexual harassment. Examples of this type of sexual harassment include, but are not limited to, the following:

- requesting or demanding sexual favors in exchange for employment or academic opportunities (such as hiring, promotions, grades, or recommendations);
- submitting unfair or inaccurate job or academic evaluations or grades, or denying training, promotion, or access to any other employment or academic opportunity, because sexual advances have been rejected.

Other types of unwelcome conduct of a sexual nature can also constitute sexual harassment, if sufficiently severe or pervasive that the target does find, and a reasonable person would find, that an intimidating, hostile, or abusive work or academic environment has been created. Examples of this kind of sexual harassment include, but are not limited to, the following:

- sexual comments, teasing, or jokes;
- sexual slurs, demeaning epithets, derogatory statements, or other verbal abuse;
- graphic or sexually suggestive comments about an individual's attire or body;
- inquiries or discussions about sexual activities;
- pressure to accept social invitations, to meet privately, to date, or to have sexual relations;
- sexually suggestive letters or other written materials;
- sexual touching, brushing up against another in a sexual manner, graphic or sexually suggestive gestures, cornering, pinching, grabbing, kissing, or fondling;
- coerced sexual intercourse or sexual assault.

D. Consensual Relationships

Amorous, dating, or sexual relationships that might be appropriate in other circumstances have inherent dangers when they occur between a faculty member, supervisor, or other member of the University community and any person for whom he or she has a professional responsibility. These dangers can include: that a student or employee may feel coerced into an unwanted relationship because he or she fears that refusal to enter into the relationship will adversely affect his or her education or employment; that conflicts of interest may arise when a faculty member, supervisor, or other member of the University community is required to evaluate the work or make personnel or academic decisions with respect to an individual with whom he or she is having a romantic relationship; that students or employees may perceive that a fellow student or coworker who is involved in a romantic relationship will receive an unfair advantage; and that if the relationship ends in a way that is not amicable, either or both of the parties may wish to take action to injure the other party.

Faculty members, supervisors, and other members of the University community who have professional responsibility for other individuals, accordingly, should be aware that any romantic or sexual involvement with a student or employee for whom they have such a responsibility may raise questions as to the mutuality of the relationship and may lead to charges of sexual harassment. For the reasons stated above, such relationships are strongly discouraged.

For purposes of this section, an individual has "professional responsibility" for another individual at the University if he or she performs functions including, but not limited to, teaching, counseling, grading, advising, evaluating, hiring, supervising, or making decisions or recommendations that confer benefits such as promotions, financial aid awards or other remuneration, or that may impact upon other academic or employment opportunities.

E. Academic Freedom

This policy shall not be interpreted so as to constitute interference with academic freedom.

F. False and Malicious Accusations

Members of the University community who make false and malicious complaints of sexual harassment, as opposed to complaints which, even if erroneous, are made in good faith, will be subject to disciplinary action.

G. Procedures

The University has developed procedures to implement this policy. The President of each constituent college of the University, the Senior Vice Chancellor at the Central Office, and the Dean of the Law School shall have ultimate responsibility for overseeing compliance with this policy at his or her respective unit of the University. In addition, each dean, director, department chairperson, executive officer, administrator, or other person with supervisory responsibility shall be required to report any complaint of sexual harassment to the individual or individuals designated in the procedures. All members of the University community are required to cooperate in any investigation of a sexual harassment complaint.

H. Enforcement

There is a range of corrective actions and penalties available to the University for violations of this policy. Students, faculty, or staff who are found, following applicable disciplinary proceedings, to have violated this Policy are subject to various penalties, including termination of employment and/or student expulsion from the University.

Sexual Harassment Awareness and Intake Committee

The Sexual Harassment Awareness and Intake Committee is responsible for educating the Lehman College community about sexual harassment and its potential consequences to the University community. The members of the Sexual Harassment Awareness and Intake Committee are available to respond to inquiries, receive complaints alleging sexual harassment from any member of the college community, and to refer individuals and/or the complaint to the Sexual Harassment Coordinator. The members of the Sexual Harassment Awareness and Intake Committee are:

Anney Baez, Counseling Center
(718-960-8761)

Chelsea Campbell, Paralegal Studies Program/
Continuing Education (718-960-1159)

Vanessa Gonzalez, Campus Life
(718-960-8468)

Joette Reaves, Health Programs/Continuing
Education (718-960-8998)

Maritza Rivera, Office of Compliance and
Diversity (718-960-8111)

Michael Sullivan, Campus Life (718-960-8535)

Sexual Harassment Coordinator

Dawn Ewing Morgan, Office of Compliance
and Diversity (718-960-8111)

Sexual Harassment Deputy Coordinators

Graciela Castex, Sociology and Social Work
(718-960-7864)

John Cirace, Economics & Accounting
(718-960-8388)

Vincent Zucchetto, Student Affairs
(718-960-8242)

LEHMAN COLLEGE RECORDS POLICY

Prohibition on Submission of Fraudulent Admission Documents

The submission of documents in support of applications for admission such as transcripts, diplomas, test scores, references, or the applications themselves, that are forged, fraudulent, altered from the original, materially incomplete, obtained under false pretenses, or otherwise deceptive (collectively referred to as fraudulent documents) is prohibited and is punishable by a five-year bar on applying for admission or five-year suspension from CUNY. A second violation is punishable by a lifetime ban on applying for admission or expulsion from CUNY.

When fraudulent admissions documents are discovered prior to an applicant's enrollment, sanctions will be imposed centrally. A first offense will be punishable by a five-year bar on applying for admission and a second offense will result in a lifetime ban. The accused applicant will have the opportunity to appeal to the Vice Chancellor for Student Development.

If the fraudulent admissions document is discovered after the student completes registration or begins classes at a college, the student shall be suspended for five years with the right to appeal through the college student disciplinary process. A second offense results in expulsion.

If the fraudulent admissions document is discovered after the student has already graduated, the graduate shall be notified in writing and shall be entitled to a disciplinary hearing under Article 15 of the Board Bylaws. If the disciplinary committee sustains the charges, the committee may impose a five-year suspension and in addition recommend the revocation of the degree. A second violation results in expulsion. Any recommendation to revoke a degree is subject to the approval by the Board of Trustees after considering the recommendation of the faculty of the college.

Family Educational Rights and Privacy Act (F.E.R.P.A.)

The Family Educational Rights and Privacy Act (F.E.R.P.A.) affords students certain rights with respect to their education records.

They are:

1. The right to inspect and review the student's education records.
Students should submit to the registrar, dean, head of the academic department, or other appropriate official, written requests that identify the record(s) they wish to inspect. If the records are not maintained by the College official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.
All requests shall be granted or denied in writing within 15 days of receipt. If the request is granted, the student will be notified of the time and place where the records may be inspected. If the request is denied or not responded to within 15 days, the student may appeal. Additional information regarding the appeal procedures will be provided to the student if a request is denied.
2. The right to request the amendment of the student's education records that the student believes are inaccurate or misleading.

Students may ask the College to amend a record that they believe is inaccurate or misleading. They should write to the College official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading.

If the College decides not to amend the record as requested by the student, the College will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to consent to disclosure of personally identifiable information contained in the student's education records, except to the extent that F.E.R.P.A. authorizes disclosure without consent.

One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by the University in an administrative, supervisory, academic or research, or support staff position; a person or company with whom the University has contracted; a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.

A school official has a legitimate educational interest if access is reasonably necessary in order to perform his/her instructional, research, administrative, or other duties and responsibilities.

Upon request, the College discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

4. You may appeal the alleged denial of F.E.R.P.A. rights to the:

General Counsel and Vice Chancellor for Legal Affairs

The City University of New York
535 East 80th Street
New York, NY 10075

5. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the College to comply with the requirements of F.E.R.P.A.

The name and address of the Office that administers F.E.R.P.A. are:

Family Policy Compliance Office
U.S. Department of Education
600 Independence Avenue, SW
Washington, DC 20202-4605

6. The College may make the following "directory information" concerning current and former students available to those parties having a legitimate interest in the information: a student's name, attendance dates, telephone listing, home address, present address, date of birth, place of birth, photograph, E-mail address, full-or part-time status, class schedule, class roster (list), participation in officially recognized activities other than sports, participation in sports (teams), height if member of an athletic team, weight if member of an athletic team, previous schools attended, major and minor fields of study, and degrees and awards received. *By filing a form with the Registrar's Office, a student or former student may request that any or all of the above information not be released without his or her prior written consent.* This form may be completed, withdrawn, or modified at any time.

NEW YORK STATE EDUCATION LAW SECTION 224-A

Students unable because of religious beliefs to register or attend classes on certain days:

1. No person shall be expelled from or be refused admission as a student to an institution of higher education for the reason that he is unable, because of his religious beliefs, to register or attend classes or to participate in any examination, study, or work requirements on a particular day or days.
2. Any student in an institution of higher education who is unable, because of his religious beliefs, to attend classes on a particular day or days shall, because of such absence on the particular day or days, be excused from any examination or any study or work requirements.
3. It shall be the responsibility of the faculty and of the administrative officials of each institution of higher education to make available to each student who is absent from school, because of his religious beliefs, an equivalent opportunity to register for classes or make up any examination, study, or work requirements which he may have missed because of such absence on any particular day or days. No fees of any kind shall be charged by the institution for making available to the said student such equivalent opportunity.
4. If registration, classes, examinations, study, or work requirements are held on Friday after four o'clock post meridian or on Saturday, similar or makeup classes, examinations, study, work requirements, or opportunities shall be made available on other days, where it is possible and practicable to do so. No special fees shall be charged to the student for these classes, examinations, study, or work requirements, or registration held on other days.
5. In effectuating the provisions of this section, it shall be the duty of the faculty and of the administrative officials of each institution of higher education to exercise the fullest measure of good faith. No adverse or prejudicial effects shall result to any student because of his availing himself of the provisions of this section.
6. Any student, who is aggrieved by the alleged failure of any faculty or administrative officials to comply in good faith with the provisions of this section, shall be entitled to maintain an action or proceeding in the Supreme Court of the county in which such institution of higher education is located for the enforcement of his rights under this section.

COLLEGE POLICIES, PROCEDURES & REGULATIONS

Lehman College, like most institutions of higher learning, has regulations and policies governing academic standards and procedures, class attendance, final examinations, grade records, personal health, and conduct. They have been established in accordance with the *Bylaws* of the Board of Trustees, and on recommendation of the College's governance body—the Lehman College Senate. Specific policies and regulations are enumerated in this *Bulletin* and in the *Student Guide*, available in the Office of the Vice President of Student Affairs, the Division of Adult and Continuing Education, and the Office of Academic Advising, Standards, and Evaluation.

Conduct

Article XV, Section 15.1 (Conduct Standard Defined) of the *Bylaws* of the Board of Trustees of The City University of New York reads as follows:

Each student enrolled or in attendance in any college, school, or unit under the control of the Board and every student organization, publication, club, or chapter shall obey the laws of the City, State, and Nation, and the published rules, regulations, and orders of the Board of Higher Education and the duly established college authorities. Application to Lehman College constitutes acceptance of the foregoing provisions as well as of the detailed rules set forth in the Appendix.

THE CITY UNIVERSITY OF NEW YORK COMPUTER USER RESPONSIBILITIES

NOTE: The City University of New York Computer User Responsibilities is a statement originally prepared by the University's Computer Policy Committee. It underwent review by the University Faculty Senate and the CUNY Office of the Vice Chancellor for Legal Affairs.

Introduction

CUNY's computer resources are dedicated to the support of the university's mission of education, research, and public service. In furtherance of this mission, CUNY respects, upholds, and endeavors to safeguard the principles of academic freedom, freedom of expression, and freedom of inquiry.

CUNY recognizes that there is a concern among the university community that because information created, used, transmitted, or stored in electronic form is by its nature susceptible to disclosure, invasion, loss, and similar risks, electronic communications and transactions will be particularly vulnerable to infringements of academic freedom. CUNY's commitment to the principles of academic freedom and freedom of expression includes electronic information. Therefore, whenever possible, CUNY will resolve doubts about the need to access CUNY computer resources in favor of a user's privacy interest.

However, the use of CUNY computer resources, including for electronic transactions and communications, like the use of other university-provided resources and activities, is subject to the requirements of legal and ethical behavior. This policy is intended to support the free exchange of ideas among members of the CUNY community and between the CUNY community and other communities, while recognizing the responsibilities and limitations associated with such exchange.

Applicability

This policy applies to all users of CUNY computer resources, whether affiliated with CUNY or not, and whether accessing those resources on a CUNY campus or remotely.

This policy supersedes the CUNY policy, titled "CUNY Computer User Responsibilities," and any college policies that are inconsistent with this policy.

Definitions

"CUNY Computer resources" refers to all computer and information technology hardware, software, data, access and other resources owned, operated, or contracted by CUNY. This includes, but is not limited to, personal computers, handheld devices, workstations, mainframes, minicomputers, servers, network

facilities, databases, memory, and associated peripherals and software, and the applications they support, such as e-mail and access to the internet.

"E-mail" includes point-to-point messages, postings to newsgroups and listservs, and other electronic messages involving computers and computer networks.

Rules for Use of CUNY Computer Resources

- 1. Authorization.** Users may not access a CUNY computer resource without authorization or use it for purposes beyond the scope of authorization. This includes attempting to circumvent CUNY computer resource system protection facilities by hacking, cracking or similar activities, accessing or using another person's computer account, and allowing another person to access or use the user's account. This provision shall not prevent a user from authorizing a colleague or clerical assistant to access information under the user's account on the user's behalf while away from a CUNY campus or because of a disability. CUNY computer resources may not be used to gain unauthorized access to another computer system within or outside of CUNY. Users are responsible for all actions performed from their computer account that they permitted or failed to prevent by taking ordinary security precautions.
- 2. Purpose.** Use of CUNY computer resources is limited to activities relating to the performance by CUNY employees of their duties and responsibilities. For example, use of CUNY computer resources for private commercial or not-for-profit business purposes, for private advertising of products or services, or for any activity meant solely to foster personal gain, is prohibited. Similarly, use of CUNY computer resources for partisan political activity is also prohibited. Except with respect to CUNY employees other than faculty, where a supervisor has prohibited it in writing, incidental personal use of computer resources is permitted so long as such use does not interfere with CUNY operations, does not compromise the functioning of CUNY computer resources, does not interfere with the user's employment or other obligations to CUNY, and is otherwise in compliance with this policy.
- 3. Compliance with Law.** CUNY computer resources may not be used for any purpose or in any manner that violates CUNY rules, regulations, or policies, or federal, state, or local law. Users who engage in electronic communications with persons in other states or countries or on other systems or networks may also be subject to the laws of those other states and countries, and the rules and policies of those other systems and networks. Users are responsible for ascertaining, understanding, and complying with the laws, rules, policies, contracts, and licenses applicable to their particular use. Examples of applicable federal and state laws include the laws of libel, obscenity and child pornography, as well as the following:
Family Educational Rights and Privacy Act
Electronic Communications Privacy Act
Computer Fraud and Abuse Act
New York State Freedom of Information Law
New York State Law with respect to the confidentiality of library records

Examples of applicable CUNY rules and policies include the following:

- Sexual Harassment Policy
 - Policy on Maintenance of Public Order
 - Web Site Privacy Policy
 - Gramm-Leach-Bliley Information Security Program
 - University Policy on Academic Integrity
 - Information Security policies
- 4. Licenses and Intellectual Property.** Users of CUNY computer resources may use only legally obtained, licensed data or software and must comply with applicable licenses or other contracts, as well as copyright, trademark, and other intellectual property laws.
Much of what appears on the Internet and/or is distributed via electronic communication is protected by copyright law, regardless of whether the copyright is expressly noted. Users of CUNY computer resources should generally assume that material is copyrighted unless they know otherwise, and not copy, download, or distribute copyrighted material without permission unless the use does not exceed fair use as defined by the federal Copyright Act of 1976. Protected material may include, among other things, text, photographs, audio, video, graphic illustrations, and computer software.
 - 5. False Identity and Harassment.** Users of CUNY computer resources may not employ a false identity, mask the identity of an account or computer, or use computer resources to engage in abuse of others, such as sending harassing, obscene, threatening, abusive, deceptive, or anonymous messages within or outside CUNY.
 - 6. Confidentiality.** Users of CUNY computer resources may not invade the privacy of others by, among other things, viewing, copying, modifying or destroying data, or programs belonging to or containing personal or confidential information about others, without explicit permission to do so. CUNY employees must take precautions to protect the confidentiality of personal or confidential information encountered in the performance of their duties or otherwise.
 - 7. Integrity of Computer Resources.** Users may not install, use, or develop programs intended to infiltrate or damage a computer resource, or which could reasonably be expected to cause, directly or indirectly, excessive strain on any computing facility. This includes, but is not limited to, programs known as computer viruses, Trojan horses, and worms. Users should consult with the I.T. director at their college before installing any programs that they are not sure are safe.
 - 8. Disruptive Activities.** CUNY computer resources must not be used in a manner that could reasonably be expected to cause or does cause, directly or indirectly, unwarranted or unsolicited interference with the activity of other users. This provision explicitly prohibits chain letters, virus hoaxes, or other intentional e-mail transmissions that disrupt normal e-mail service. Also prohibited are spamming, junk mail or other unsolicited mail that is not related to CUNY business and is sent without a reasonable expectation that the recipient would welcome receiving it, as well as the inclusion on e-mail lists of individuals who have not requested membership on the lists, other than the inclusion of members of the CUNY community on lists

related to CUNY business. CUNY has the right to require users of CUNY computer resources to limit or refrain from other specific uses if, in the opinion of the IT director at the user's college, such use interferes with efficient operations of the system, subject to appeal to the President or, in the case of central office staff, to the Chancellor.

- 9. CUNY Names and Trademarks.** CUNY names, trademarks and logos belong to the university, and are protected by law. Users of CUNY computer resources may not state or imply that they speak on behalf of CUNY or use a CUNY name, trademark, or logo without authorization to do so. Affiliation with CUNY does not, by itself, imply authorization to speak on behalf of CUNY.
- 10. Security.** CUNY employs various measures to protect the security of its computer resources and of users' accounts. However, CUNY cannot guarantee such security. Users are responsible for engaging in safe computing practices, such as guarding and not sharing their passwords, changing passwords regularly, logging out of systems at the end of use, and protecting private information, as well as for following CUNY's Information Security policies and procedures. Users must report incidents of Information Security policy non-compliance or other security incidents to CUNY's Chief Information Officer and Chief Information Security Officer, and the IT director at the affected user's college.
- 11. Filtering.** CUNY reserves the right to install spam, virus, and spyware filters and similar devices if necessary in the judgment of CUNY's Office of Information Technology or a college IT director to protect the security and integrity of CUNY computer resources. Notwithstanding the foregoing, CUNY will not install filters that restrict access to e-mail, instant messaging, chat rooms, or websites based solely on content.
- 12. Confidential Research Information.** Principal investigators and others who use CUNY computer resources to store or transmit research information that is required by law or regulation to be held confidential or for which a promise of confidentiality has been given, are responsible for taking steps to protect confidential research information from unauthorized access or modification. In general, this means storing the information on a computer that provides strong access controls (passwords) and encrypting files, documents, and messages for protection against inadvertent or unauthorized disclosure while in storage or in transit over data networks. Robust encryption is strongly recommended for information stored electronically on all computers, especially portable devices such as notebook computers, Personal Digital Assistants (P.D.A.'s), and portable data storage (e.g., memory sticks) that are vulnerable to theft or loss, as well as for information transmitted over public networks. Software and protocols used should be reviewed and approved by CUNY's Office of Information Technology.
- 13. CUNY Access to Computer Resources.** CUNY does not routinely monitor, inspect, or disclose individual usage of its computer resources without the user's consent. In most instances, if the university needs information located in a CUNY computer resource, it will simply request it from the author or custodian. However, CUNY I.T. professionals and staff do regularly monitor general usage patterns as part of normal system operations and maintenance and

might, in connection with these duties, observe the contents of web sites, e-mail, or other electronic communications. Except as provided in this policy or by law, these individuals are not permitted to seek out contents or transactional information, or disclose or otherwise use what they have observed. Nevertheless, because of the inherent vulnerability of computer technology to unauthorized intrusions, users have no guarantee of privacy during any use of CUNY computer resources or in any data in them, whether or not a password or other entry identification or encryption is used. Users may expect that the privacy of their electronic communications and of any materials contained in computer storage in any CUNY electronic device dedicated to their use will not be intruded upon by CUNY except as outlined in this policy.

CUNY may specifically monitor or inspect the activity and accounts of individual users of CUNY computer resources, including individual login sessions, e-mail, and other communications, without notice, in the following circumstances:

- a. when the user has voluntarily made them accessible to the public, as by posting to Usenet or a web page;
- b. when it is reasonably necessary to do so to protect the integrity, security, or functionality of CUNY or other computer resources, as determined by the college chief information officer or his or her designee, after consultation with CUNY's chief information officer or his or her designee;
- c. when it is reasonably necessary to diagnose and resolve technical problems involving system hardware, software, or communications, as determined by the college chief information officer or his or her designee, after consultation with CUNY's chief information officer or his or her designee;
- d. when it is reasonably necessary to protect CUNY from liability, or when failure to act might result in significant bodily harm, significant property loss or damage, or loss of significant evidence, as determined by the college president or a vice president designated by the president, after consultation with the Office of General Counsel and the Chair of the University Faculty Senate (if a CUNY faculty member's account or activity is involved) or Vice Chair if the Chair is unavailable;
- e. when there is a reasonable basis to believe that CUNY policy or federal, state, or local law has been or is being violated, as determined by the college president or a vice president designated by the president, after consultation with the Office of General Counsel and the Chair of the University Faculty Senate (if a CUNY faculty member's account or activity is involved) or Vice Chair if the Chair is unavailable;
- f. when an account appears to be engaged in unusual or unusually excessive activity, as indicated by the monitoring of general activity and usage patterns, as determined by the college president or a vice president designated by the president and the college chief information officer or his or her designee, after consultation with CUNY's chief information officer or his or her designee, the Office of General Counsel, and the Chair of the University Faculty Senate (if a CUNY faculty member's account or activity is involved) or Vice Chair if the Chair is unavailable; or as otherwise required by law.

- g. In those situations in which the Chair of the University Faculty Senate is to be consulted prior to monitoring or inspecting an account or activity, the following procedures shall apply: (i) the college president shall report the completion of the monitoring or inspection to the Chair and the CUNY employee affected, who shall also be told the reason for the monitoring or inspection, except where specifically forbidden by law; and (ii) if the monitoring or inspection of an account or activity requires physical entry into a faculty member's office, the faculty member shall be advised prior thereto and shall be permitted to be present to observe, except where specifically forbidden by law.

A CUNY employee may apply to the General Counsel for an exemption from some or all of the circumstances under which CUNY may inspect and monitor computer resource activity and accounts, pursuant to subparagraphs (a)-(f) above, with respect to a CUNY computer resource used solely for the collection, examination, analysis, transmission, or storage of confidential research data. In considering such application, the General Counsel shall have the right to require the employee to affirm in writing that the computer resource will be used solely for the confidential research. Any application for exemption should be made prior to using the computer resource for the confidential research.

CUNY, in its discretion, may disclose the results of any general or individual monitoring or inspection to appropriate CUNY personnel or agents, or law enforcement or other agencies. The results may be used in college disciplinary proceedings, discovery proceedings in legal actions, or otherwise as is necessary to protect the interests of the University.

In addition, users should be aware that CUNY may be required to disclose to the public under the New York State Freedom of Information Law communications made by means of CUNY computer resources in conjunction with University business.

Any disclosures of activity of accounts of individual users to persons or entities outside of CUNY, whether discretionary or required by law, shall be approved by the General Counsel and shall be conducted in accordance with any applicable law. Except where specifically forbidden by law, CUNY employees subject to such disclosures shall be informed promptly after the disclosure of the actions taken and the reasons for them.

The Office of General Counsel shall issue an annual statement of the instances of account monitoring or inspection that fall within categories (d) through (g) above. The statement shall indicate the number of such instances and the cause and result of each. No personally identifiable data shall be included in this statement.

See CUNY's Web Site Privacy Policy for additional information regarding data collected by CUNY from visitors to the CUNY website at www.cuny.edu.

14. **Enforcement.** Violation of this policy may result in suspension or termination of an individual's right of access to CUNY computer resources, disciplinary action by appropriate CUNY authorities, referral to law enforcement authorities for criminal prosecution, or other legal action, including action to recover civil damages and penalties.

Violations will normally be handled through the university disciplinary procedures applicable to the relevant user. For example, alleged violations by students will normally be investigated, and any penalties or other discipline will normally be imposed, by the Office of Student Affairs.

CUNY has the right to temporarily suspend computer use privileges and to remove from CUNY computer resources material it believes violates this policy, pending the outcome of an investigation of misuse or finding of violation. This power may be exercised only by the President of each college or the Chancellor.

15. **Additional Rules.** Additional rules, policies, guidelines and/or restrictions may be in effect for specific computers, systems, or networks, or at specific computer facilities at the discretion of the directors of those facilities. Any such rules which potentially limit the privacy or confidentiality of electronic communications or information contained in or delivered by or over CUNY computer resources will be subject to the substantive and procedural safeguards provided by this policy.

16. **Disclaimer.** CUNY shall not be responsible for any damages, costs or other liabilities of any nature whatsoever with regard to the use of CUNY computer resources. This includes, but is not limited to, damages caused by unauthorized access to CUNY computer resources, data loss, or other damages resulting from delays, non-deliveries, or service interruptions, whether or not resulting from circumstances under the CUNY's control.

Users receive and use information obtained through CUNY computer resources at their own risk. CUNY makes no warranties (expressed or implied) with respect to the use of CUNY computer resources. CUNY accepts no responsibility for the content of web pages or graphics that are linked from CUNY web pages, for any advice or information received by a user through use of CUNY computer resources, or for any costs or charges incurred by a user as a result of seeking or accepting such advice or information.

CUNY reserves the right to change this policy and other related policies at any time. CUNY reserves any rights and remedies that it may have under any applicable law, rule or regulation. Nothing contained in this policy will in any way act as a waiver of such rights and remedies.

FREEDOM OF SPEECH

Freedom of speech is an essential tradition of any academic community. All members of the Lehman community must be vigilant in exercising their rights of expression so as not to preclude other persons' guaranteed right to give and receive expression as part of the deliberative process of the academic community. Preservation of this right on campus requires the scrupulous use of means of communication. Public-address systems and all other amplification devices are prohibited.

SMOKING

Smoking is prohibited in all buildings owned, leased, or operated by the City University of New York.

DRUG AND ALCOHOL USAGE

The use of illegal drugs will subject the individual to the penalties provided by law. Individual problems with drugs may be discussed in strict confidence with the counseling faculties of the College. The use of legal drugs that are nevertheless injurious to the health is not condoned. The use of alcohol by anyone under 21 years of age is illegal and prohibited.

IDENTIFICATION CARDS

Identification cards, issued by the College, must be carried at all times. Students are required to present their I.D. cards upon the request of any College official. Any guest of a student visiting the campus must obtain a pass from Campus Security (The APEX, Room 109) and must present it upon request.

ATTENDANCE AND ABSENCES

Students in basic skills courses are required to attend classes. Students in all other courses are expected to attend classes regularly, and instructors are required to record attendance for grading and counseling purposes. Individual instructors, as well as departments or degree programs, may establish specific attendance requirements. Instructors have the right to weigh attendance and class participation in determining grades. It is the student's responsibility to ascertain the effect attendance may have on the grade in a course. Students receiving financial aid must be certified as attending classes regularly for continuing eligibility.

PETITIONING

For a petition to be circulated by any student or student group, two copies shall be filed with the Office of Student Activities. All copies of the petition must bear the name of the group or groups circulating the petition.

SOLICITATION ON CAMPUS

No student or nonstudent may use any part of the College buildings and grounds (including Bulletin boards) for soliciting or selling any merchandise or service without the express permission of the Vice President of Student Affairs. Lehman College and the City University of New York do not sponsor any products, merchandising schemes, or tours. Advertising appearing in student publications does not imply the sponsorship of the College.

REPRESENTING THE COLLEGE

No student or student organization may be a self-appointed representative of Lehman College or any division thereof, nor of The City University of New York.

EXTRACURRICULAR ACTIVITIES AND PROGRAMS

Group Activities

The College offers a wide range of extracurricular activities and programs. These include departmental, religious, social, political, and athletic activities; creative events, such as art displays and literary, musical, and dramatic performances; and extracurricular lectures on varied topics. Students publish newspapers and other publications and have the opportunity to join a variety of clubs.

Policy on Guest Speakers

Student groups have the right to hear speakers of their choice in accordance with the rules set by the College. It may not, however, be assumed that speakers invited by students represent the views of the College.

Student Government

Student government consists of The Campus Association for Student Activities (C.A.S.A.), which plans and administers programs and allocates funds for student groups, and the Student Conference, which represents students' interests in the Lehman College Senate.

Participation in College Governance

Students shall comprise a permanent one-third of the total membership of the Senate, based upon combining the total number of voting faculty and voting administration representatives. Senate meetings are open to all students and staff at the College. Students are also represented on College committees. The student senators comprise the Student Conference.

NOTIFICATION OF STUDENT IMMUNIZATION REQUIREMENTS

Students who do not submit proof of measles, mumps, and rubella (M.M.R.) immunization or who fail to return the meningococcal meningitis response form within a statutory grace period shall be prohibited from attending the institution. For additional information, contact the Student Health Center located in the T-3 Building, Room 118 at the following phone number: 718-960-8900.

Public Health Law 2165 requires that post-secondary students be immunized against measles, mumps, and rubella (M.M.R.).

All registered full-time students and part-time students born on or after January 1, 1957 who are enrolled for at least six, but fewer than twelve semester hours (or equivalent) per semester in an approved degree program or registered certificate program must submit proof of M.M.R. immunization. Students may be exempt from the required M.M.R. immunizations for religious or medical reasons. To qualify for a religious exception, students must submit a signed statement, or in the event the student is a minor (under 18), a signed statement from their parent or guardian, that they hold sincere and genuine religious beliefs that prohibit immunization. To qualify for a medical exception, students must submit a written statement from a licensed physician or nurse practitioner indicating that such immunization may be detrimental to their health.

Public Health Law 2167 requires that postsecondary institutions provide written information about meningococcal meningitis to its students and that students complete, sign, and return a meningococcal meningitis response form. Public Health Law 2167 does not require that students be immunized against meningitis.

Public Health Law 2167 requires colleges to distribute written information about meningococcal meningitis disease and vaccination and students to complete, sign, and return to the College, a meningococcal meningitis response form that: (a) confirms that the college has provided the information about meningococcal meningitis; and (b) indicates that either: (1) the student has received immunization against meningococcal meningitis within the 10 years preceding the date of the response form; or (2) the student has decided against receiving the vaccination. This law applies to students who are enrolled in at least six semester hours (or the equivalent) per semester. No student may be exempt from receiving information or returning the response form.

FREEDOM OF INFORMATION LAW NOTICE

Requests to inspect public records at the college should be made to the Records Access Officer, Esdras Tulier, special counsel to the President, who is located in Shuster Hall, Room 376 (718-960-8559). Public records are available for inspection and copying by appointment only at a location to be designated. You have a right to appeal a denial of a request for access to records to the CUNY General Counsel and Vice Chancellor for Legal Affairs. Copies of the CUNY Procedures for Public Access to Public Records Pursuant to Article 6 of the Public Officers Law and the appeal form are available at the Reference Desk of the Library and on the College website.

CUNY POLICY ON ACADEMIC INTEGRITY

Academic Dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion, as provided herein.

Definitions and Examples of Academic Dishonesty

Cheating is the unauthorized use or attempted use of material, information, notes, study aids devices, or communication during an academic exercise.

The following are some examples of cheating, but by no means is it an exhaustive list:

- Copying from another student during an examination or allowing another to copy your work.
- Unauthorized collaboration on a take-home assignment or examination.
- Using notes during a closed-book examination.
- Taking an examination for another student, or asking or allowing another student to take an examination for you.
- Changing a graded exam and returning it for more credit.
- Submitting substantial portions of the same paper to more than one course without consulting with each instructor.
- Preparing answers or writing notes in a blue book (exam booklet) before an examination.
- Allowing another to research and write assigned papers or do assigned projects, including use of commercial term paper services.
- Giving assistance to acts of academic misconduct/dishonesty.
- Fabricating data (all or in part).
- Submitting someone else's work as your own.
- Unauthorized use during an examination of any electronic devices, such as cell phones, palm pilots, computers, or other technologies to retrieve or send information.

Plagiarism is the act of presenting another person's ideas, research, or writings as your own.

The following are some examples of plagiarism, but by no means is it an exhaustive list:

- Copying another person's actual words without the use of quotation marks and footnotes attributing the words to their source.
- Presenting another person's ideas or theories in your own words without acknowledging the source.
- Using information that is not common knowledge without acknowledging the source.

- Failing to acknowledge collaborators on homework and laboratory assignments. Internet Plagiarism includes submitting downloaded term papers or parts of term papers, paraphrasing or copying information from the Internet without citing the source, and “cutting & pasting” from various sources without proper attribution.

Obtaining Unfair Advantage is any activity that intentionally or unintentionally gives a student an unfair advantage in his/her academic work over another student.

The following are some examples of obtaining an unfair advantage, but by no means it is an exhaustive list:

- Stealing, reproducing, circulating, or otherwise gaining advance access to examination materials.
- Depriving other students of access to library materials by stealing, destroying, defacing, or concealing them.
- Retaining, using, or circulating examination materials which clearly indicate that they should be returned at the end of the exam.
- Intentionally obstructing or interfering with another student’s work.

Falsification of Records and Official Documents

- The following are some examples of falsification, but by no means is it an exhaustive list:
- Forging signatures of authorization.
- Falsifying information on an official academic record.
- Falsifying information on an official document, such as a grade report, letter of permission, drop/add form, I.D. card, or other College document.

PROCEDURES FOR IMPOSITION OF SANCTIONS FOR VIOLATIONS OF CUNY POLICY ON ACADEMIC INTEGRITY

Introduction

As a legal matter, in disciplining students for violations of policies of academic integrity, CUNY, as a public institution, must conform to the principles of due process mandated by the Fourteenth Amendment to the United States Constitution—generally speaking, to provide notice of the charges and some opportunity to be heard. In the context of court-litigated violations, questions as to how much and what kind of process was “due” turn on the court’s judgment whether the decision on culpability was “disciplinary” (a question of fact) or “academic” (a question of the instructor’s expert judgment). This distinction has proved difficult to apply on campus. Accordingly, these procedures provide for alternative approaches depending on the severity of the sanction(s) being sought. If the instructor desires solely an “academic” sanction, that is, a grade reduction, less process is due than if a “disciplinary” sanction, such as suspension or expulsion, is sought.

A faculty member who suspects that a student has committed a violation of the CUNY or the College Academic Integrity Policy shall review with the student the facts and circumstances of the suspected violation whenever possible. The decision whether to seek an academic sanction only, rather than a disciplinary sanction or both types of sanctions, will rest with the faculty member in

the first instance, but the College retains the right to bring disciplinary charges against the student. Among the factors the College should consider in determining whether to seek a disciplinary sanction are whether the student has committed one or more prior violations of the Academic Integrity Policy and mitigating circumstances, if any. It is strongly recommended that every instance of suspected violation should be reported to the Academic Integrity Official on a form provided by the College. Among other things, this reporting will allow the College to determine whether it wishes to seek a disciplinary sanction even where the instructor may not wish to do so.

Procedures in Cases Where the Instructor Seeks an Academic Sanction Only

1. Student Accepts Guilt and Does Not Contest the Academic Sanction

If the faculty member wishes to seek only an academic sanction (i.e., a reduced grade¹ only), and the student does not contest either his/her guilt or the particular reduced grade the faculty member has chosen, then the student shall be given the reduced grade, unless the College decides to seek a disciplinary sanction. (see Section I above and IV below). The reduced grade may apply to the particular assignment as to which the violation occurred or to the course grade, at the faculty member’s discretion.

2. Student Denies Guilt and/or Contests the Academic Sanction

If the student denies guilt or contests the particular grade awarded by the faculty member, then the matter shall be handled using the College’s grade appeals process, including departmental grading committees where applicable, or the Academic Integrity Committee. In either case, the process must, at a minimum, provide the student with an opportunity to be heard and to present evidence.

¹A reduced grade can be an “E,” a “D,” or another grade that is lower than the grade that would have been given but for the violation.

Procedures in Cases Where a Disciplinary Sanction Is Sought

If a faculty member suspects a violation and seeks a disciplinary sanction, the faculty member shall refer the matter to the College’s Academic Integrity Official using the Faculty Report form to be adjudicated by the College’s Faculty-Student Disciplinary Committee under Article 15 of the CUNY Bylaws. As provided for therein, the Faculty-Student Disciplinary Committee may, among other things, investigate, conciliate, or hear evidence on cases in which disciplinary charges are brought.² Under certain circumstances, College officials other than the Academic Integrity Official may seek disciplinary sanctions following the procedures outlined above. If a reduced grade is also at issue, then that grade should be held in abeyance, pending the Faculty-Student Disciplinary Committee’s action.

²Typically, disciplinary sanctions would be sought in cases of the most egregious, or repeated, violations, for example: infraction in ways similar to criminal activity (such as forging a grade form; stealing an examination from a professor or a university office; or forging a transcript); having a substitute take an examination or taking an examination for someone else; sabotaging another student’s work through actions designed to prevent the student from successfully completing an assignment; dishonesty that affects a major or essential portion of work done to meet course requirements. [These examples have been taken from a list of violations compiled by Rutgers University.]

Procedures in Cases in Which Both a Disciplinary and an Academic Sanction Are Sought

If a faculty member or the College seeks to have both a disciplinary and an academic sanction imposed, it is not advisable to proceed on both fronts simultaneously lest inconsistent results ensue. Thus, it is best to begin with the disciplinary proceeding seeking imposition of a disciplinary sanction and await its outcome before addressing the academic sanction. If the Faculty-Student Disciplinary Committee finds that the alleged violation occurred, then the faculty member may reflect that finding in the student’s grade. If the Faculty-Student Disciplinary Committee finds that the alleged violation did not occur. Then no sanction of any kind may be imposed. The decision whether to pursue both types of sanctions will ordinarily rest with the faculty member.

Reporting Requirements

1. By the Faculty Member to the Academic Integrity Official

In cases where a violation of academic integrity has been found to have occurred (whether by admission or a fact-finding process), the faculty member should promptly file with the Academic Integrity Official a report of the adjudication in writing on a Faculty Report form provided by the College as described above. The Academic Integrity Official shall maintain a confidential file for each student about whom a suspected or adjudicated violation is reported. If either the grade appeals process or the Faculty-Student Disciplinary Committee finds that no violation occurred, the Academic Integrity Official shall remove and destroy all material relating to that incident from the student’s confidential academic integrity file. Before determining what sanction(s) to seek, the faculty member or the Academic Integrity Official may consult the student’s confidential academic integrity file, if any, to determine whether the student has been found to have previously committed a violation of the Academic Integrity Policy, the nature of the infraction, and the sanction imposed or action taken.

2. By the Academic Integrity Official to the Faculty Member

Where a matter proceeds to the Faculty-Student Disciplinary Committee, the Academic Integrity Official shall promptly report its resolution to the faculty member and file a record of the resolution in the student’s confidential academic integrity file, unless, as indicated above, the suspected violation was held to be unfounded, in which case all reporting forms concerning that suspected violation shall be destroyed.

PROCEDURES FOR HANDLING STUDENT COMPLAINTS ABOUT FACULTY CONDUCT IN ACADEMIC SETTINGS

- 1. Introduction.** The University and its Colleges have a variety of procedures for dealing with student-related issues, including grade appeals, academic integrity violations, student discipline, disclosure of student records, student elections, sexual harassment complaints, disability accommodations, and discrimination. One area not generally covered by other procedures concerns student complaints about faculty conduct in the classroom or other formal academic settings. The University respects the academic freedom of the faculty and will not interfere with it as it relates to the content or style of teaching activities. Indeed, academic freedom is and should be of paramount importance. At the same time the University recognizes its responsibility to provide students with a procedure for addressing complaints about faculty treatment of students that are not protected by academic freedom and are not covered by other procedures. Examples might include incompetent or inefficient service, neglect of duty, physical or mental incapacity, and conduct unbecoming a member of the staff.
- 2. Determination of Appropriate Procedure.** If students have any question about the applicable procedure to follow for a particular complaint, they should consult with the chief student affairs officer. In particular, the chief student affairs officer should advise a student if some other procedure is applicable to the type of complaint the student has.
- 3. Informal Resolution.** Students are encouraged to attempt to resolve complaints informally with the faculty member or to seek the assistance of the department chairperson or campus ombudsman to facilitate informal resolution.
- 4. Formal Complaint.** If the student does not pursue informal resolution, or if informal resolution is unsuccessful, the student may file a written complaint with the department chairperson or, if the chairperson is the subject of the complaint, with the academic dean or a senior faculty member designated by the college president. (This person will be referred to below as the "Fact Finder.")
- 5.** The complaint shall be filed within 30 calendar days of the alleged conduct unless there is good cause shown for delay, including but not limited to delay caused by an attempt at informal resolution. The complaint shall be as specific as possible in describing the conduct complained of.
- 6.** The Fact Finder shall promptly send a copy to the faculty member about whom the complaint is made, along with a letter stating that the filing of the complaint does not imply that any wrongdoing has occurred and that a faculty member must not retaliate in any way against a student for having made a complaint. If either the student or the faculty member has reason to believe that the department chairperson may be biased or otherwise unable to deal with the complaint in a fair and objective manner, he or she may submit to the academic dean or the senior faculty member designated by the college president a written request stating the reasons for that

belief; if the request appears to have merit, that person may, in his or her sole discretion, replace the department chairperson as the Fact Finder.

- 7.** The Fact Finder shall meet with the complaining student and faculty member, either separately or together, to discuss the complaint and to try to resolve it. The Fact Finder may seek the assistance of the campus ombudsman or other appropriate person to facilitate informal resolution.
- 8.** If resolution is not possible, and the Fact Finder concludes that the facts alleged by the student, taken as true and viewed in the light most favorable to the student, establish that the conduct complained of is clearly protected by academic freedom, he or she shall issue a written report dismissing the complaint and setting forth the reasons for dismissal and send a copy to the complaining student, the faculty member, the chief academic officer, and the chief student affairs officer. Otherwise, the Fact Finder shall conduct an investigation. The Fact Finder shall separately interview the complaining student, the faculty member, and other persons with relevant knowledge and information and shall also consult with the chief student affairs officer and, if appropriate, the college ombudsman. The Fact Finder shall not reveal the identity of the complaining student and the faculty member to others except to the extent necessary to conduct the investigation. If the Fact Finder believes it would be helpful, he or she may meet again with the student and faculty member after completing the investigation in an effort to resolve the matter. The complaining student and the faculty member shall have the right to have a representative (including a union representative, student government representative, or attorney) present during the initial meeting, the interview, and any post-investigation meeting.
- 9.** At the end of the investigation, the Fact Finder shall issue a written report setting forth his or her findings and recommendations, with particular focus on whether the conduct in question is protected by academic freedom, and send a copy to the complaining student, the faculty member, the chief academic officer, and the chief student affairs officer. In ordinary cases, it is expected that the investigation and written report should be completed within 30 calendar days of the date the complaint was filed.
- 10. Appeals Procedure.** If either the student or the faculty member is not satisfied with the report of the Fact Finder, the student or faculty member may file a written appeal to the chief academic officer within 10 calendar days of receiving the report. The chief academic officer shall convene, and serve as the chairperson of an Appeals Committee, which shall also include the chief student affairs officer, two faculty members elected annually by the faculty council or senate and one student elected annually by the student senate. The Appeals Committee shall review the findings and recommendations of the report, with particular focus on whether the conduct in question is protected by academic freedom. The Appeals Committee shall not conduct a new factual investigation or overturn any factual findings contained in the report unless they are clearly erroneous. If the Appeals Committee decides to reverse the Fact Finder in a case where there has not been an investigation because the Fact Finder

erroneously found that the alleged conduct was protected by academic freedom, it may remand to the Fact Finder for further proceedings. The committee shall issue a written decision within 20 calendar days of receiving the appeal. A copy of the decision shall be sent to the student, the faculty member, the department chairperson, and the president.

- 11. Subsequent Action.** Following the completion of these procedures, the appropriate college official shall decide the appropriate action, if any, to take. For example, the department chairperson may decide to place a report in the faculty member's personnel file or the president may bring disciplinary charges against the faculty member. Disciplinary charges may also be brought in extremely serious cases even though the college has not completed the entire investigative process described above; in that case, the bringing of disciplinary charges shall automatically suspend that process. Any action taken by a college must comply with the bylaws of the University and the collective bargaining agreement between the University and the Professional Staff Congress.
- 12. Campus Implementation.** Each campus shall implement these procedures and shall distribute them widely to administrators, faculty members and students, and post them on the college website.
- 13. Board Review.** During the spring 2009 semester, the Chancellery shall conduct a review of the experience of the colleges with these procedures, including consultation with administrators, faculty, and students, and shall report the results of that review to the Board of Trustees, along with any recommended changes.

THE CITY UNIVERSITY OF NEW YORK WORKPLACE VIOLENCE POLICY & PROCEDURES

The City University of New York has a long-standing commitment to promoting a safe and secure academic and work environment that promotes the achievement of its mission of teaching, research, scholarship, and service. All members of the University community—students, faculty and staff—are expected to maintain a working and learning environment free from violence, threats of harassment, violence, intimidation, or coercion. While these behaviors are not prevalent at the University, no organization is immune.

The purpose of this policy is to address the issue of potential workplace violence in our community, prevent workplace violence from occurring to the fullest extent possible, and set forth procedures to be followed when such violence has occurred.

Policy

The City University of New York prohibits workplace violence. Violence, threats of violence, intimidation, harassment, coercion, or other threatening behavior toward people or property will not be tolerated. Complaints involving workplace violence will not be ignored and will be given the serious attention they deserve. Individuals who violate this policy may be removed from University property and are subject to disciplinary and/or personnel action up to and including termination, consistent with University policies, rules, and collective bargaining agreements, and/or referral to law

enforcement authorities for criminal prosecution. Complaints of sexual harassment are covered under the University's Policy Against Sexual Harassment.

The University, at the request of an employee or student, or at its own discretion, may prohibit members of the public, including family members, from seeing an employee or student on University property unless necessary to transact University-related business. This policy particularly applies in cases where the employee or student suspects that an act of violence will result from an encounter with said individual(s).

Scope

All faculty, staff, students, vendors, contractors, consultants, and others who do business with the University, whether in a University facility or off-campus location where University business is conducted, are covered by this policy. This policy also applies to other persons not affiliated with the University, such as former employees, former students, and visitors. When students have complaints about other students, they should contact the Office of Student Affairs at their campus.

Definitions

Workplace violence is any behavior that is violent, threatens violence, coerces, harasses, or intimidates others, interferes with an individual's legal rights of movement or expression, or disrupts the workplace, the academic environment, or the University's ability to provide services to the public. Examples of workplace violence include, but are not limited to:

1. Disruptive behavior intended to disturb, interfere with, or prevent normal work activities (such as yelling, using profanity, verbally abusing others, or waving arms and fists).
2. Intentional physical contact for the purpose of causing harm (such as slapping, stabbing, punching, striking, shoving, or other physical attack).
3. Menacing or threatening behavior (such as throwing objects, pounding on a desk or door, damaging property, stalking, or otherwise acting aggressively; or making oral or written statements specifically intended to frighten, coerce, or threaten), where a reasonable person would interrupt such behavior as constituting evidence of intent to cause harm to individuals or property.
4. Possessing firearms, imitation firearms, knives, or other dangerous weapons, instruments, or materials. No one within the University community shall have in their possession a firearm, or other dangerous weapon, instrument, or material that can be used to inflict bodily harm on an individual or damage to University property without specific written authorization from the Chancellor or the College President, regardless of whether the individual possesses a valid permit to carry the firearm or weapon.

Reporting of Incidents

1. **General Reporting Responsibilities**
Incidents of workplace violence, threats of workplace violence, or observations of workplace violence are not to be ignored by any member of the University community. Workplace violence should promptly be reported to the appropriate University official (see below). Additionally, faculty, staff, and students are encouraged to report behavior that they reasonably believe poses a potential for workplace violence as defined above. It is important that all

members of the University community take this responsibility seriously to effectively maintain a safe working and learning environment.

2. **Imminent or Actual Violence**
Any person experiencing or witnessing imminent danger or actual violence involving weapons or personal injury should call the Campus Public Safety Office immediately, or call 911.
3. **Acts of Violence Not Involving Weapons or Injuries to Persons**
Any person who is the subject of a suspected violation of this policy involving violence without weapons or personal injury, or is a witness to such suspected violation, should report the incident to his or her supervisor, or in lieu thereof, to their respective Campus Public Safety Office. Students should report such incidents to the Office of Student Affairs at their campus or in lieu thereof, their campus Public Safety Office. The Campus Public Safety Office will work with the Office of Human Resources and the supervisor or the Office of Student Affairs on an appropriate response.
4. **Commission of a Crime**
All individuals who believe a crime has been committed against them have the right, and are encouraged, to report the incident to the appropriate law enforcement agency.
5. **False Reports**
Members of the University community who make false and malicious complaints of workplace violence, as opposed to complaints which, even if erroneous, are made in good faith, will be subject to disciplinary action and/or referral to civil authorities as appropriate.
6. **Incident Reports**
The University will report incidents of workplace violence consistent with the College Policies for Incident Reporting Under the Campus Security Policy and Statistical Act (Cleary Act).

Responsibilities

1. Presidents

The President of each constituent college of the City University of New York, the Chief Operating Officer at the Central Office, and the Deans of the Law School and the Sophie Davis School of Biomedical Education shall be responsible for the implementation of this policy on his or her respective campus. The responsibility includes dissemination of this policy to all members of the college community, ensuring appropriate investigation and follow-up of all alleged incidents of workplace violence, constituting a Workplace Violence Advisory Team (See #7 below), and ensuring that all administrators, managers, and supervisors are aware of their responsibilities under this policy through internal communications and training.

2. Campus Public Safety Office

The Campus Public Safety Office is responsible for responding to, intervening, and documenting all incidents of violence in the workplace. The Campus Public Safety Office will immediately log all incidents of workplace violence and will notify the respective supervisor of an incident with his/her employee, or notify the appropriate campus official of an incident with a student. All officers should be knowledgeable of when law enforcement action may be appropriate. Public Safety will maintain an internal tracking system of all threats and

incidents of violence. Annual reports will be submitted to the President (at the same time as the report noted below), detailing the number and description of workplace violence incidents, the disposition of the incidents, and recommend policy, training issues, or security procedures that were or should be implemented to maintain a safe working and learning environment. These incidents will be reported in the Annual Report of the College Advisory Committee on Campus Security consistent with the reporting requirements of Article 129A Subsection 6450 of the N.Y.S. Education Law (Regulation by Colleges of Conduct on Campuses and Other College Property for Educational Purposes).

Officers will be trained in workplace violence awareness and prevention, non-violent crises intervention, conflict management, and dispute resolution.

Officers will work closely with Human Resources when the possibility of workplace violence is heightened, as well as on the appropriate response to workplace violence incidents consistent with CUNY policies, rules, procedures, and applicable labor agreements, including appropriate disciplinary action up to and including termination.

When informed, Public Safety will maintain a record of any Orders of Protection for faculty, staff, and students. Public Safety will provide escort service to members of the college community within its geographical confines, when sufficient personnel are available. Such services are to be extended at the discretion of the Campus Public Safety Director or designee. Only the President, or designee, in his/her absence, can authorize escort service outside of the geographical confines of the college.

3. Supervisors

Each dean, director, department chairperson, executive officer, administrator, or other person with supervisory responsibility (hereinafter "supervisor") is responsible within his/her area of jurisdiction for the implementation of this policy. Supervisors must report to their respective Campus Public Safety Office any complaint of workplace violence made to him/her and any other incidents of workplace violence of which he/she becomes aware or reasonably believes to exist. Supervisors are expected to inform their immediate supervisor promptly about any complaints, acts, or threats of violence even if the situation has been addressed and resolved. After having reported such complaint or incident to the Campus Public Safety Director and immediate supervisor, the supervisor should keep it confidential and not disclose it further, except as necessary during the investigation process and/or subsequent proceedings.

Supervisors are required to contact the Campus Public Safety Office immediately in the event of imminent or actual violence involving weapons or potential physical injuries.

4. Faculty and Staff

Faculty and staff must report workplace violence, as defined above, to their supervisor. Faculty and staff who are advised by a student that a workplace violence incident has occurred or has been observed must report this to the Campus Public Safety Director immediately. Recurring or persistent workplace violence that an employee reasonably believes is not being addressed

satisfactorily, or violence that is, or has been, engaged in by the employee's supervisor, should be brought to the attention of the Campus Public Safety Director.

Employees who have obtained Orders of Protection are expected to notify their supervisors and the Campus Public Safety Office of any orders that list CUNY locations as protected areas.

Victims of domestic violence who believe the violence may extend into the workplace, or employees who believe that domestic or other personal matters may result in their being subject to violence extending into the workplace, are encouraged to notify their supervisor, or the Campus Public Safety Office. Confidentiality will be maintained to the extent possible.

Upon hiring, and annually thereafter, faculty and staff will receive copies of this policy. Additionally, the policy will be posted throughout the campus and be placed on the CUNY website and on the college's website, as appropriate.

5. Office of Human Resources

The Office of Human Resources at each campus is responsible for assisting the Campus Public Safety Director and supervisors in responding to workplace violence; facilitating appropriate responses to reported incidents of workplace violence; notifying the Campus Public Safety Office of workplace violence incidents reported to that office; and consulting with, as necessary, counseling services to secure professional intervention.

The Office of Human Resources is responsible for providing new employees or employees transferred to the campus with a copy of the Workplace Violence Policy and Procedures and insuring that faculty and staff receive appropriate training. The Office of Human Resources will also be responsible for annually disseminating this policy to all faculty and staff at their campus, as well as posting the policy throughout the campus and on the college's website, as appropriate.

6. Students

Students who witness violence, learn of threats, or are victims of violence by employees, students, or others should report the incident immediately to the Campus Public Safety Office. If there is no imminent danger, students should report threatening incidents by employees, students, or others as soon as possible to the Campus Public Safety Office or Office of Student Affairs. Students will be provided with workplace violence awareness information (including information regarding available counseling services) upon registration each year.

7. Workplace Violence Advisory Team

A college president shall establish a Workplace Violence Advisory Team at his/her college. This Team, working with the College Advisory Committee on Campus Security, will assist the president in responding to workplace violence; facilitating appropriate responses to reported incidents of workplace violence; assessing the potential problem of workplace violence at its site; assessing the college's readiness for dealing with workplace violence; evaluating incidents to prevent future occurrences; and utilizing prevention, intervention, and interviewing techniques in responding to workplace violence. This Team will also develop workplace violence prevention tools

(such as pamphlets, guidelines, and handbooks) to further assist in recognizing and preventing workplace violence on campus. It is recommended that this Team include representatives from Campus Public Safety, Human Resources, Labor Relations, Counseling Services, Occupational Health and Safety, Legal, and others, including faculty, staff, and students, as deemed appropriate by the president.

In lieu of establishing the Workplace Violence Advisory Team, a president may opt to expand the College Advisory Committee on Campus Security with representatives from the areas recommended above to address workplace violence issues at the campus and perform the functions outlined above.

8. University Communications

All communications to the University community and outside entities regarding incidents of workplace violence will be made through the University Office of University Relations after consultation with the respective President or his/her designee.

Education

Colleges are responsible for the dissemination and enforcement of this policy as described herein, as well as for providing opportunities for training in the prevention and awareness of workplace violence. The Office of Faculty and Staff Relations will provide assistance to the campuses in identifying available training opportunities, as well as other resources and tools (such as reference materials detailing workplace violence warning signs), that can be incorporated into campus prevention materials for dissemination to the college community. Additionally, the Office of Faculty & Staff Relations will offer periodic training opportunities to supplement the college's training programs.

Confidentiality

The University shall maintain the confidentiality of investigations of workplace violence to the extent possible. The University will act on the basis of anonymous complaints where it has a reasonable basis to believe that there has been a violation of this policy and that the safety and well-being of members of the University community would be served by such action.

Retaliation

Retaliation against anyone acting in good faith who has made a complaint of workplace violence, who has reported witnessing workplace violence, or who has been involved in reporting, investigating, or responding to workplace violence is a violation of this policy. Those found responsible for retaliatory action will be subject to discipline up to and including termination.

NOTICE OF ACCESS TO CAMPUS CRIME STATISTICS, THE CAMPUS SECURITY REPORT, AND INFORMATION ON REGISTERED SEX OFFENDERS

The College Advisory Committee on Campus Safety will provide upon request all campus crime statistics as reported to the U.S. Department of Education, as well as the annual campus security report. The campus security report includes:

1. the campus crime statistics for the most recent calendar year and the two preceding calendar years;

2. campus policies regarding procedures and facilities to report criminal actions or other emergencies on campus;
3. policies concerning the security of and access to campus facilities;
4. policies on campus law enforcement;
5. a description of campus programs to inform students and employees about campus security procedures and practices and to encourage students and employees to be responsible for their own security and the security of others;
6. campus crime prevention programs;
7. policy concerning the monitoring through the police of criminal activity at off-campus locations of student organizations officially recognized by the college;
8. policies on illegal drugs, alcohol, and underage drinking;
9. where information provided by the State on registered sex offenders may be obtained (also see below); and
10. policies on campus sexual assault programs aimed at the prevention of sex offenses and procedures to be followed when a sex offense occurs. This information is maintained pursuant to the federal Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act.

The campus crime statistics and the annual campus security report are available at the Reference Desk of the Library and the College website at www.lehman.edu. If you wish to be mailed copies of the campus crime statistics and the annual campus security report, contact Alicia Cruz, assistant director of public safety, at 718-960-8593, and copies will be mailed to you within 10 days. The U.S. Department of Education's website address for campus crime statistics is: www.ed.gov/security/InstDetail.asp (then input the name of the school).

In accordance with the federal Campus Sex Crimes Prevention Act, registered sex offenders now are required to register the name and address of any college at which he or she is a student or employee. The New York State Division of Criminal Justice maintains a registry of convicted sex offenders and informs the college's chief security (public safety) officer of the presence on campus of a registered sex offender as a student or employee. You may contact Alicia Cruz, assistant director of public safety, in Room 109 of the APEX (718-960-8593) to obtain information about Level 2 or Level 3 registered sex offenders on campus. To obtain information about Level 3 offenders, visit the Division's registry website at www.criminaljustice.state.ny.us/nsor/sor_about.htm and then click on "Search for Level 3 Sex Offenders" or access the directory at the College's public safety department or police precinct. To obtain information about Level 2 offenders, contact the public safety department, the local police precinct in which the offender resides or attends college, or the Division's sex offender registry at 800-262-3257.

ATHLETIC PROGRAM PARTICIPATION NOTICE

Lehman College files an annual report with the U.S. Secretary of Education on intercollegiate athletics that includes information on the participation of males and females on its teams, and the expenditures and revenues of those teams. Copies of the annual report on intercollegiate athletics are available at the reference desk of the Library.

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